International Journal of Psychological Studies

CCSE

Canadian Center of Science and Education

Editorial Board

Contents

The Effects of Background Auditory Interference and Extraversion on Creative and Cognitive Task Performance

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Abstract

The present study examined the effects of different types of background auditory stimuli on the cognitive and creative task performance of introverts and extraverts. A sample of 77 high-school students completed two cognitive tasks (Baddeley Reasoning Test and sentence-completion) and a creative task (Alternate-Uses Test of divergent thinking) under one of four different background auditory conditions (speech, noise, music, or silence), as well as being assessed on Extraversion. Results showed no significant main or interactive effects of background auditory stimuli and personality on either cognitive task performance. However, there was a significant interactive effect on creative performance, with extraverts performing better in the presence of music than introverts. Consistencies and discrepancies with past literature are discussed.

Keywords: Auditory interference, Personality, Extraversion, Creativity, Cognitive, Performance

1. The effects of background auditory interference and personality on creative and cognitive task performance

Recent technological advances have made different modes of music widely accessible (e.g., North, Hargreaves, & O'Neill, 2000; Schwartz & Fouts, 2003), and it is, therefore, not surprising that psychologists have addressed a number of important questions concerning music and other auditory stimuli in everyday life (MacDonald, Hargreaves, & Miell, 2002). For instance, studies have examined the associations between music and social behaviour (e.g., North, Hargreaves, & McKendrick, 2000; O'Donnell, MacDonald, & Davies, 1999), social identity formation (e.g., Tarrant, North, & Hargreaves, 2004), emotionality (Juslin & Sloboda, 2001), and personality (e.g., Chamorro-Premuzic & Furnham, 2007; Chamorro-Premuzic, Swami, Furnham, & Maakip, 2009).

In contrast, much less research has focused on the possible distracting effects of music on cognitive abilities – an important oversight given the amount of time that adolescents in particular spend listening to music (e.g., Schwartz & Fouts, 2003). Indeed, in an early commentary, Konecni (1982) suggested that music processing requires cognitive capacity, such that listening to music should impair cognitive task performance. As a test of this hypothesis, a number of studies have investigated the effects of music presented during a cognitive task, in comparison with other forms of background noise or music (although a handful of studies have also examined the priming effects of music; e.g., see McKelvie & Low, 2002).

Thus, studies examined the effects of background music (e.g., Cassidy & MacDonald, 2007; Daoussis & McKelvie, 1986; Furnham & Allass, 1999; Iwanaga & Ito, 2002), irrelevant speech (e.g., Salamé & Baddeley, 1989), television programmes (e.g., Furnham, Gunter, & Peterson, 1994), and auditory noise (e.g., Belojevic, Slepcevic, & Jakovcevic, 2001; Hygge, Evans, & Bullinger, 2002; Ylias & Heaven, 2003) on cognitive performance. Individual differences in task performance in these studies have typically been interpreted in terms of Eysenck's (1967) theory of personality, which posits that differences in Introversion-Extraversion are largely a function of individuals' levels of cerebral

arousal (how excitable their nervous system is). Specifically, extraverts, who have a higher arousal threshold, seek external stimuli to increase their arousal in order to attain an optimal level, whereas introverts avoid (or reduce) external stimuli to maintain an optimal level of arousal (for a review, see Stelmach, 1987).

In support of this hypothesis, studies have shown that the effects of background auditory interference on task performance are different for extraverts and introverts. Daoussis and McKelvie (1986), for instance, demonstrated that, in the presence of music, introverts' performance on a reading comprehension task was significantly lower than that of extraverts', when compared with performance in silence. Furnham and Bradley (1997) extended these findings by assessing levels of distraction of radio extracts on memory recall and a reading comprehension task. They found that, in both cases, introverts were more significantly affected by the distraction than were extraverts. More recently, Furnham and Allass (1999) looked at the effect of 'simple' and 'complex' music on the performance of introverts and extraverts, finding that complex music tended to impair the performance of introverts but improve that of extraverts. Finally, in a recent study, Cassidy and MacDonald (2007) reported that introverts were more detrimentally affected by the presence of high arousal music compared with extraverts.

Other studies have looked at the distracting effects of noise rather than music. On mental arithmetic and prose recall tasks, for instance, Banbury and Berry (1998) found that performance was significantly poorer in the presence of unpredictable office noise when compared to performance in silence (see also Evans & Johnson, 2000). However, these studies did not consider personality differences in relation to task performance. To overcome this limitation, Belojevic et al. (2001) explored whether an individual's level of Introversion had an effect on a mental arithmetic task in the presence of recorded traffic noise. They found that among introverts, there was a marked deterioration in performance, while extraverts worked faster in the noise condition in comparison to a quiet condition.

More recently, Furnham and Strbac (2002) examined whether music is as distracting as noise, with participants completing reading comprehension, prose recall, and mental arithmetic tasks in the presence of background garage music and office noise. They found that introverts performed significantly poorer than extraverts on the reading comprehension task in the presence of music and noise, but that the distracting effects of music and noise were not significantly different when completing prose recall and arithmetic tasks. The contradictions between this and earlier studies (e.g., Banbury, & Berry, 1998) might be due in part to the different tasks that have been used: Konz (1962), for instance, found that music detrimentally affected a letter-matching task but not a manual assembly task (see also Furnham & Bradley, 1997).

Yet other studies have investigated the effects of background speech on cognitive performance (e.g., Morgenstern, Hodgson, & Law, 1974). In one study, Salamé and Baddeley (1989) found a distracting effect of irrelevant speech on immediate serial recall, while Jones, Miles, and Page (1990) demonstrated that the more meaningful the speech, the more detrimental its effect on performance. More recently, Furnham, Trew, and Sneade (1999) asked introverts and extraverts to complete reading comprehension and logic-problem and coding tasks in the presence of vocal and instrumental music. In this study, introverts reported that vocal music was more distracting than instrumental music, although there was no significant difference in their performance in the presence of either simple or complex music.

1.1 The Present Study

In short, although previous work has generally suggested that background auditory stimuli is more detrimental for task performance by introverts compared with extraverts, the extant literature is complicated by the use of a range of different types of auditory stimuli and measures of task performance. In the present study, we sought to disambiguate some of these concerns by examining whether different types of background auditory interference would significantly impair cognitive task-performance (cognitive reasoning and sentence-completion) among introverts and extraverts. Specifically, we examined three different types of background auditory interference (music, noise, and dialogue speech compared with silence) in order to assess their comparative interference effects on performance, and whether they interact with Extraversion level. Based on the above review, we expected that extraverts would evidence better cognitive task performance than introverts on all three noise conditions.

In addition, the present study extended previous work by investigating the effects of background auditory interference on creative task performance. Guildford (1950, 1967) proposed several distinctions in creativity, including ideational fluency (ability to produce ideas within a time frame), convergence (choosing ideas that are frequent within a group), and divergence (ability to choose unusual associations of ideas). Various studies have shown that the personality factors of Openness to Experience and Extraversion are consistently associated with these different aspects of creativity (for a review, see Batey & Furnham, 2006). To date, however, no study has examined the effects of personality and background auditory interference, or a combination of both, on creative task-performance (in this study, operationalised as divergent thinking or ideational fluency). As such, this part of the study was exploratory in nature, although we did expect auditory interference to have a detrimental effect on creative task-performance for introverts more than extraverts (given the similar task demands that creativity has compared with cognitive tasks).

2. Method

2.1 Participants

Participants of the study were 77 high-school students, of whom 60 were women and 17 were men (Note 1). These participants had a mean age of 17.09 years (SD = 0.59, range = 16-18 years), were of European Caucasian descent, and self-reported English to be their first language.

2.2 Background Stimuli

In relation to music stimuli, it may be expected that greater listening frequency might lead to greater liking and predictability of tracks and, in turn, lead to decreased perceptions of stimuli complexity and arousal. We, therefore, only selected songs that had not been released into national music charts as of April 2001 (when the study was conducted). Moreover, because preference for music is known to affect task performance (Furnham & Bradley, 1997), music stimuli in the present study were compiled from four different genres representing pop (Kylie Minogue with 'Give It To Me'), R&B (Brandy's 'Can We?'), hip hop (Ja Rule's 'Lost Little Girl'), and alternative (the Red Hot Chilli Peppers with 'The Velvet Glove'). The first minute of each song was recorded on audio cassette and was separated by a 0.50-second gap to reduce disruption during the experiment. Noise stimuli were recorded from the BBC *Sound of the City* compact disc series, and consisted of general office noise and featured telephone ringing lasting 4 minutes. Finally, 4 minutes of dialogue speech was extracted from *The Archers* series featured on BBC Radio 4.

2.3 Measures

The Baddeley Reasoning Test (BRT; Baddeley, 1968). This is a 64-item test administered in three minutes and that measures logical reasoning abilities. The test consists of 64 sentences describing the order of two given letters (e.g., AB or BA) and for which participants have to verify the logical validity within 3 minutes. A point is scored for each correct answer, and scores can range from 0 to 64 (higher scores refer to greater cognitive ability on this task). The test has been employed previously in several studies (e.g. Furnham et al., 1994) to obtain a quick and reliable indicator of people's intellectual ability. However in the current study it was used to operationalise logical verbal reasoning under different auditory distractions.

The Scholastic Aptitude Test (SAT). Ten sentence-completion items were taken from the SAT and required participants to choose a word or set of words that provided the appropriate meaning from a sentence with omitted word or words. The 10 sentences chosen for the present study were used in a pilot test (N = 10, 5 women, 5 men) to ensure the appropriate level of difficulty. Participants were given 4 minutes to complete the task, and scored a point for each correctly completed sentence. Scores ranged from 0 to 10, with higher scores referring to greater cognitive ability on this task.

Alternate-Uses Test (Christensen, Guilford, Merrifield, & Wilson, 1960). To measure fluency of creative performance (also known as ideational fluency or divergent thinking), we used a modified example of the Alternate-Uses Test in which participants were requested to name alternative uses for everyday objects. Participants were given 1 minute to write down as many answers as they could for 4 objects adapted from Guildford (1959): *paper clips*, *spoon*, *cork*, and *shoelaces*. The task was tested in a pilot study (N = 10, 5 women, 5 men) to ensure that a variable number of answers could be obtained. Performance on the task was measured in terms of ideational frequency, with participants receiving a score for every idea generated. For all subsequent analyses, fluency scores were *z*-transformed for the univariate analyses in order to facilitate interpretation of results (higher scores refer to greater creative task performance).

The Neuroticism-Extraversion-Openness Five Factor Inventory (NEO-FFI; Costa & McCrae, 1992) was used to assess Extraversion. This is a 60-item, non-timed questionnaire that also assesses four other personality traits, not used in the current study (Neuroticism, Openness to Experience, Agreeableness, and Conscientiousness). Items – 12 for Extraversion – involve questions about typical behaviours or reactions that are rated on 5-point Likert scale (0 = *Strongly disagree*, 4 = *Strongly agree*). The NEO-FFI manual reports good indicators of reliability and validity (Costa & McCrae, 1992). In the present study, participants were categorised as either extraverted or introverted using a median split (introverts n = 39, extraverts n = 38).

Post-test questionnaire. Participants completed a post-test questionnaire to determine their level of distraction experienced in the presence of music, noise, and dialogue speech (1 = *Not at all distracted*, 4 = *Very distracted*). In addition, participants indicated how often they studied with music on a 4-point scale (1 = *Never*, 4 = *Always*).

2.4 Procedure

Once ethical permission and informed consent was obtained, participants completed the tasks in one of four groups (n_1 = 21, n_2 = 17, n_3 = 17, n_4 = 22), with seating arranged in a circle to prevent social contagion effects. A trained experimenter read out standardised instructions before the experiment began and answered participants' questions. Participants then completed the two cognitive and one creative problem-solving tasks. The order in which each group completed the tasks was counterbalanced using the Latin-square arrangement. Groups completed a task in the presence

of music (the order of genre was counterbalanced), noise, dialogue speech, or silence. The background sound was played on a CD in the middle of the room (approx. 8 feet from participants) at a moderately loud level (approx. 25 decibels) to ensure that the sound pressure level was relatively similar for all participants seated in the circle). Upon completion of the tasks, participants completed the NEO-FFI and post-test questionnaire. The entire experiment lasted approximately 35 minutes and participants were verbally debriefed at the end of the procedures. All participants took part on a voluntary basis and were not remunerated for participation.

3. Results

3.1 Descriptive Statistics

Means and standard deviations for the two cognitive ability tests (BRT and SAT) and ideational fluency are reported in Table 1.

3.2 Analyses of Variance

A 4 x 2 (4 levels of auditory stimuli: music, noise, dialogue speech, silence; 2 levels of personality: extraverts versus introverts) ANOVA with BRT scores as the dependent variable showed no main effect of personality, $F(1, 69) = 0.78$, *ns*, $\eta_p^2 = .01$, nor a main effect of auditory interference, $F(3, 69) = 0.81$, *ns*, $\eta_p^2 = .01$. In addition, there was no significant interaction between personality and auditory interference, $F(3, 69) = 0.76$, *ns*, $\eta_p^2 = .01$. When the same analysis was repeated with sentence-completion scores as the dependent variable, results once again showed no significant main effect of personality, $F(1, 69) = 1.79$, *ns*, $\eta_p^2 = .02$, or of auditory interference, $F(3, 69) = 0.94$, *ns*, $\eta_p^2 = .01$. Nor was there a significant interaction between personality and auditory interference, $F(3, 69) = 0.24$, *ns*, $\eta_p^2 = .01$.

Finally, the same 4 x 2 ANOVA for ideational fluency showed no main effect of personality, $F(1, 69) = 1.27$, *ns*, $\eta_p^2 = .02$, and no main effect of auditory interference, $F(3, 69) = 0.67$, *ns*, $\eta_p^2 = .02$. There was, however, a significant interaction between personality and auditory interference, $F(3, 69) = 3.00$, $p < .05$, $\eta_p^2 = .12$. This interaction is graphically represented in Figure 1. Tests of simple effects showed that extraverts performed better than introverts in the presence of music, $t(15) = 2.98$, $p < .05$, $d = 1.51$, but that there were no significant between-group differences in the presence of speech, noise, or silence (all *t*s < 1.53, all *ns*).

3.3 Post-Test Questionnaire

Pearson's correlations were carried out to examine the relationship between Extraversion (in this instance, used as a continuous variable) and ratings on the post-test questionnaire. Results showed no significant correlations between Extraversion and how distracting participants found dialogue speech ($r = -.10$, $p > .05$), music ($r = .04$, $p > .05$), or noise ($r = -.10$, $p > .05$). By contrast, there was a significant positive correlation between Extraversion and individuals' likelihood of studying with background music ($r = .82$, $p < .001$).

4. Discussion

In the present study, we sought to investigate the effects of different types of auditory interference on the cognitive and creative task performance of introverts and extraverts. Our results showed that there were no significant effects of auditory interference or personality on either of the cognitive tasks (BRT and SAT), which stands in marked contrast with the extant literature. However, the results also showed a significant interaction between auditory interference and personality on ideational fluency. Below, we discuss these results in greater detail, beginning with the significant interaction before suggesting possible reasons for the lack of significant effects in relation to the two cognitive tasks.

To our knowledge, this is the first study to have examined the effects of auditory interference on creative task performance. Our results showed that extraverts performed better on ideational fluency in the presence of music than introverts, but that there were no significant between-group differences in the presence of background noise, speech, or silence. In general, this finding is consistent with Eysenck's (1967) proposal that introverts experience greater arousal in response to a lower intensity of stimulation than extraverts. As a consequence, introverts may perform more adversely than extraverts under conditions (e.g., in the presence of background music) where they level of arousal rises beyond optimal functioning.

An important question that arises from our results is: why should music interfere with creative task performance but not cognitive abilities? One possibility is that ideational fluency is predicated upon a basic level of cognitive ability, but that the latter only accounts for a small percentage of the former (e.g., Furnham, Nederstrom, & Swami, 2008; Silva, 2008). As such, creative and cognitive tasks may be reasonably assumed to tap different abilities, resulting in the differential pattern of results seen in our study. An alternative possibility is that auditory interference in fact does not substantially affect creative task performance. This explanation is lent support by the relatively modest effect size of the interaction between auditory interference and personality, as well as the lack of significant main effects.

In contrast to the results for ideational fluency, our results suggest that there were no main effects or interactions between personality and auditory interference in relation to the BRT and sentence-completion. In general, these results stand in contrast to previous work showing that the effects of auditory interference is different for extraverts and introverts (e.g., Banbury & Berry, 1998; Belojevic et al., 2001; Cassidy & MacDonald, 2007; Daoussis & McKelvie, 1986; Furnham & Allas, 1999; Furnham & Bradley, 1997; Furnham & Strbac, 2002). One likely explanation for this discrepancy is that the effects of auditory interference on cognitive abilities are related to task-related factors, such as the complexity of a task. For instance, a number of studies have suggested that auditory interference is more likely to affect task performance on complex, rather than simple, mental tasks (e.g., Furnham & Bradley, 1997; Iwanaga & Ito, 2002). It might be speculated, therefore, that the cognitive tasks used in the present study (BRT and sentence-completion) were not sufficiently complex to elicit significant effects of auditory interference.

Finally, the results of the correlations obtained from the post-test questionnaire suggest that more extraverted individuals were more likely to study in the presence of music. In other words, this result suggests that introverts and extraverts may have different study habits, corroborating previous findings by Furnham and Bradley (1997) and Furnham and Strbac (2002). By contrast, there were no significant correlations between Extraversion and how distracting participants found dialogue speech, music, or noise. It should be noted, however, that these were fairly simple statistical analyses, and future work would do well to include more sophisticated methodological designs and analytical tools.

An important limitation of the present study is that, although we used music from different genres, we did not explicitly take genre into consideration in our analyses. Previous work has suggested that the modality and tempo of music may interact with cognitive task performance and productivity (e.g., Blood & Ferriss, 1993). For instance, calming music may improve arithmetic and memory abilities, whereas aggressive or high-tempo music may disrupt performance (Hallam, Price, & Katsarou, 2002). In addition, we did not measure participants' level of arousal or mood, which may be important mediators of the effects of music on task performance (Hallam et al., 2002).

Future work could also improve on our design in a number of ways. For instance, in order to control for possible between-group differences in noise level, participants could be tested with earphones (this would also allow researchers to test the impact of volume on task performance). In addition, future research could examine the role of other Big Five personality factors on cognitive and creative task performance in the presence of auditory distracters, given that much of the research is currently focused on Extraversion-Introversion. The operationalisation of creativity could likewise be varied, based on Guilford's (1950, 1967) definitions. Finally, further study should also seek to utilise a larger sample with a more even gender split.

In conclusion, the present results suggest that background music may have a more detrimental effect on the creative task performance of introverts compared with extraverts. In addition, the effects of auditory interference on cognitive performance may be mediated by the type of task being performed in the presence of noise, speech, or music. Given the wide appeal and accessibility of music (e.g., North et al., 2000), our results may be relevant not only for high-school students, but also for individuals in other settings seeking to maximise their productivity and task-related performance. What is required of future work is more sophisticated methodological designs that take into consideration the many different aspects of music, including emotional, physiological, social, and cultural factors.

References

Baddeley, A. (1969). A three-minute reasoning test based on grammatical transformations. *Psychonomic Science*, 10, 341-342.

Banbury, S. R., & Berry, D. (1998). Disruption of office related tasks by speech and office noise. *British Journal of Psychology*, 89, 494-517.

Batey, M. D., & Furnham, A. F. (2006). Creativity, intelligence and personality: A critical review of the scattered literature. *Genetic, Social and General Psychology Monographs*, 132, 355-429.

Belojevic, G., Slepcevic, V., & Jakovjevic, B. (2001). Mental performance in noise: the role of Introversion. *Journal of Environmental Psychology*, 21, 209-213.

Blood, D. J., & Ferriss, S. J. (1993). Effects of background music on anxiety, satisfaction with communication, and productivity. *Psychological Reports*, 72, 171-177.

Cassidy, G., & MacDonald, R. A. R. (2007). The effect of background music and background noise on the task performance of introverts and extraverts. *Psychology of Music*, 35, 517-537.

Chamorro-Premuzic, T., & Furnham, A. (2007). Personality and music: Can traits explain how people use music in everyday life? *British Journal of Psychology*, 98, 175-185.

Chamorro-Premuzic, T., Swami, V., Furnham, A., & Maakip, I. (in press). The Big Five personality traits and uses of music: A replication in Malaysia using structural equation modelling. *Journal of Individual Differences*.

Christensen, P. R., Guilford, J. P., Merrifield, P. R., & Wilson, R. C. (1960). *Alternate Uses (Form A)*. Beverly Hills, CA: Sheridan Supply.

Costa, P. T., & McCrae, R. R. (1992). *Revised NEO Personality Inventory (NEO-PI-R) and NEO Five-factor Inventory (NEO-FFI): Professional Manual*. Odessa, FL: Psychological Assessment Resources.

Daoussis, L., & McKelvie, S. J. (1986). Musical preferences and effects of music on a reading comprehension task for extraverts and introverts. *Perceptual and Motor Skills*, 62, 283-289.

Evans, G. W., & Johnson, D. (2000). Stress and open-office noise. *Journal of Applied Psychology*, 85, 779-783.

Eysenck, H. (1967). *The biological basis of personality*. Springfield, IL: Thomas.

Furnham, A., & Allass, K. (1999). The influence of musical distraction of varying complexity on the cognitive performance of extraverts and introverts. *European Journal of Personality*, 13, 27-38.

Furnham, A., & Bradley, A. (1997). Music while you work: The differential distraction of background music on the cognitive test performance of introverts and extraverts. *Applied Cognitive Psychology*, 11, 445-455.

Furnham, A., & Strbac, L. (2002). Music is as distracting as noise: The differential distraction of background music and noise on the cognitive test performance of introverts and extraverts. *Ergonomics*, 45, 203-217.

Furnham, A., Gunter, B., & Peterson, E. (1994). Television distraction and the performance of introverts and extraverts. *Applied Cognitive Psychology*, 8, 705-711.

Furnham, A., Nederstrom, M., & Swami, V. (2008). Creativity, cognitive ability and personality in a Finnish occupational sample. Manuscript under review.

Furnham, A., Trew, S. & Sneade, I. (1999). The distracting effects of vocal and instrumental music on the cognitive test performance of introverts and extraverts. *Personality and Individual Differences*, 27, 381-392.

Guilford, J. P. (1950). Creativity. *American Journal of Psychology*, 5, 444-454.

Guilford, J. P. (1959). Traits of creativity. In H. H. Anderson (Ed.), *Creativity and its cultivation* (pp. 142-161). New York, NY: Harper & Row.

Guilford, J. P. (1967). *The nature of human intelligence*. New York, NY: McGraw-Hill.

Hallam, S., Price, J., & Katsarou, G. (2002). The effects of background music on primary school pupils' task performance. *Educational Studies*, 28, 112-122.

Hygge, S., Evans, G. W., & Bullinger, M. (2002). A prospective study of some effects of aircraft noise on cognitive performance in schoolchildren. *Psychological Science*, 13, 469-474.

Iwanaga, M., & Ito, T. (2002). Disturbance effect of music on processing of verbal and spatial memories. *Perceptual and Motor Skills*, 94, 1251-1258.

Jones, D. M., Miles, C., & Page, J. (1990). Disruption of proof-reading by irrelevant speech: Effects of attention, arousal or memory? *Applied Cognitive Psychology*, 4, 89-108.

Juslin, P. N., & Sloboda, J. A. (Eds.) (2001). *Music and emotion: Theory and research*. Oxford: Oxford University Press.

Konecni, V. (1982). Social interaction and musical preference. In D. Deutsch (Ed.), *The psychology of music* (pp. 497-516). New York, NY: Academic Press.

Konz, S. A. (1962). The effect of background music on productivity of two different monotonous tasks. Paper presented to Human Factors Society, New York.

MacDonald, R. A. R., Hargreaves, D. J., & Miell, D. E. (Eds.). (2002). *Musical identities*. Oxford: Oxford University Press.

McKelvie, P., & Low, J. (2002). Listening to Mozart does not improve children's spatial ability: Final curtains for the Mozart effect. *British Journal of Developmental Psychology*, 20, 241-258.

Morgenstern, S., Hodgson, R. J., & Law, L. (1974). Work efficiency and personality. *Ergonomics*, 17, 211-220.

North, A. C., Hargreaves, D. J., & McKendrick, J. (2000). The effects of music on atmosphere and purchase intentions in a bank and a bar. *Journal of Applied Social Psychology*, 30, 1504-1522.

North, A. C., Hargreaves, D. J., & O'Neill, S. A. (2000). The importance of music to adolescents. *British Journal of Educational Psychology*, 70, 255-272.

O'Donnell, P. J., MacDonald, R. A. R., & Davies J. B. (1999). Video analysis of the effects of structured music workshops for individuals with learning difficulties. In D. Erdonmez, & R. R. Pratt (Eds.), *Music therapy and music medicine: Expanding horizons* (pp. 219-228). Saint Louis, MO: MMB Music.

Salamé, P., & Baddeley, A. (1989). Effects of background music on phonological short-term memory. *Quarterly Journal of Experimental Psychology*, 41, 107-122.

Schwartz, K. D., & Fouts, G. T. (2003). Music preferences, personality style, and developmental issues of adolescents. *Journal of Youth and Adolescence*, 32, 205-213.

Silva, P. (2008). Another look at creativity and intelligence: Exploring higher-order models and probable confounds. *Personality and Individual Differences*, 44, 1012-1021.

Stelmach, R. (1981). The psychophysiology of Extraversion and Neuroticism. In H. Eysenck (Ed.), *A model for personality* (pp. 38-64). Berlin: Springer-Verlag.

Tarrant, M., North, A. C., & Hargreaves, D. J. (2004). Adolescents' intergroup attributions: A comparison of two social identities. *Journal of Youth and Adolescence*, 33, 177-185.

Ylias, G., & Heaven, P. C. L. (2003). The influence of distraction on reading comprehension: A Big Five analysis. *Personality and Individual Differences*, 34, 1069-1079.

Note

Note 1. Given that previous work has not generally reported sex differences in the effects of auditory stimuli on task performance (e.g., Cassidy & MacDonald, 2007; Furnham & Allass, 1999; Furnham & Bradley, 1997), we did not expect the large number of women compared to men in the present study to have any major effect on the results.

Table 1. Mean scores and standard deviations for the Baddeley Reasoning Task (BRT), sentence completion (SAT), and Alternate-Uses Test (Fluency) under conditions of dialogue speech, noise, music and silence

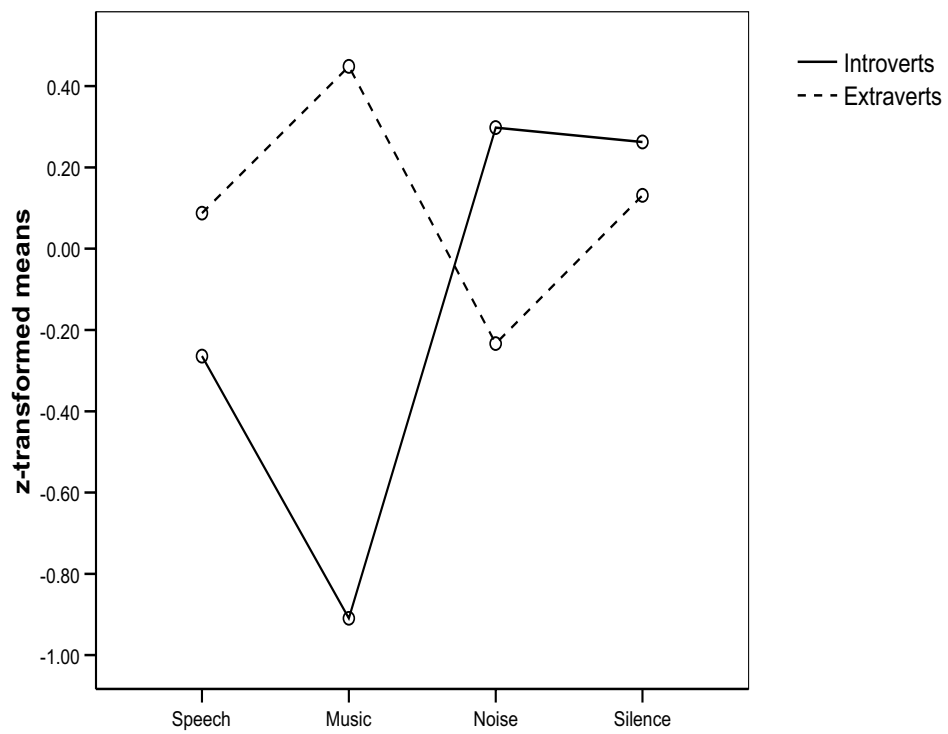|		Introverts				Extraverts			
		Speech	Noise	Music	Silence	Speech	Noise	Music	Silence
BRT	*M*	13.55	18.86	13.85	19.88	20.09	17.80	18.38	18.22
	SD	6.47	14.28	7.58	9.16	10.63	9.19	16.72	7.07
SAT	*M*	5.69	5.25	5.00	6.36	6.63	5.89	5.90	6.36
	SD	2.14	2.12	1.00	0.92	1.41	2.85	2.08	2.33
Fluency	*M*	7.84	6.16	9.27	9.20	8.75	9.69	7.92	8.86
	SD	2.85	2.12	2.04	8.86	2.69	2.57	1.68	3.27

Figure 1. Graphical representation of the significant interaction between personality and auditory interference on ideational fluency. Higher scores on the dependent variable (ideational fluency) represents better performance on this task

The Drive in the Acousma

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Abstract

The acousma is result of the process that the consciousness is drew into the unconscious black hole and declined as the unconsciousness by the large "psychological gravitation", and generates a mass of energies which are dispersed by the depressive and devious way, and replaced by the projection of the dissident attacking consciousness. And it is the result of the function of the force. The free libidos can flow to the consciousness, release the blocked energies, weaken and even eliminate the acousma.

Keywords: Archetype, Psychological gravitation, Projection, Devouring, Understanding thoroughly

The occurrence of the acousma is generally about the power which we have not known, and the power activates the consciousness and generates the delusion, and its projection forms the acousma. Though this power is uncontrollable, can not be realized by the consciousness, and is in the unconscious state, but we can observe its representations, and we can see that it is understood thoroughly, traveled, observed, discussed, appraised, judged and traced, and the patients are compelled to keep hiding and escaping continually, and the acousma plays the hide-and-seek with them like the cat plays with the mice, and the patients are forced to attack and destroy themselves. They can not follow their hearts, and they are imposed to be swept by the cyclone involuntarily, and the acousma draws the attention of the self-consciousness to the patients themselves, block attention of the self-consciousness in the patients which are drew by the gravitation as if they are seized and trampled bloodily by a invisible hand, and they have the things what they have not known in their body, and these things drive them and are the power coming from the interior of them. The destroying power comes from the interior, but the experience comes from the exterior.

What is the power? It is controlled by a large will, and dominated by a large invasive power, and experienced by the "dissident power". It is understood thoroughly, traced and traveled, which typically shows that it is captured by the power, become the object of the power, and caught by the archetype. It is others, and it is the projection of the replacing power of the power. The base map of the dissident discussion is the power. Just as what Freud thought, "We have the power what we don't know, and the power drives us". Jung had discussed "the transfer and symbol of libido", and both of them emphasized the irrational instinct drive. The drive generates the delusion, and an irrational instinct drive model is tried to be described in the article.

Where the power is from? In the process that the power is understood thoroughly, we see the whole shadow of us, the individual historical memories and personality full of infamies, frustrations and darkness, and we rarely memorize these shadows or these shadows don't be memorized by us and they are depressed by the oppression, and here, these shadows are forced to appear before us, and they firmly attract the attention of the self-consciousness. On the surface, they bear the torture of being disclosed, discussed and judged, but it is the function of the power in essence, and the depression is breached, and the personality mask is torn. When facing the dark personality, a power brings the shadow into the conscious layer and raises the unconsciousness to the consciousness. There is a conscious rising power to reconstruct the continuity and orientation of the consciousness, and make the consciousness to realize and reconstruct itself. At the same time, the shadow firmly attracts the consciousness, and we think that others understand us and the depression has not be really broken, and the self-understanding, self-discussing and self-judging are replaced by the dissident-understanding, dissident-discussing and dissident judging, and the consciousness becomes into the unconsciousness, which can not be felt by us, and in the unconsciousness, we are in the original thinking of others and materials, and the original projection, and we lose the conscious features such as differentiation and distinguishing, and we lose our boundary, and here, "body= container= world". "Projection us into the universe", and become into "original thinking" with "mystic participation with mutual containing and influencing between parts and whole". When backing to the original natural identity and the chaos of the whole, "we belong to us each other", and the power is devoured by the unconsciousness, and there is a descending power of the consciousness, and Jung called the rising power of the

consciousness as the "heliotropism", and Erich Neumann called the descending power of the consciousness as the "psychological gravitation", i.e. the unconscious devouring power.

How the power works? In the projection, the self-understanding, self-discussing and self-judging are replaced by the dissident-understanding, dissident-discussing and dissident judging, which is called as the observing discussion mode, and that is the symbol, and "the symbol is unknown, and it is the thing which is forming, and it contains the opposite, and it should induce the association and apperception, and we should know what is back the unknown, and the understanding about the symbol makes the free libido to flow and transfer, and the enhancement of the consciousness can solve the problem even exceed the problem", and the symbol drive the course of the consciousness. "The symbol has two aspects, and one is to trace the past driving by the instinct, and the other is to develop the future directing by the ultimate subject of exceeding the personality". The symbol of the myth is the inchoation of the consciousness and the consciousness differentiation. The acousma is correspondingly similar with the course of the hell archetype, which is not occasional, and it indicates that the self-consciousness is controlled and decided by the old archetype. In the depth psychology, the ghostdom, the dark and the unconsciousness are identical, and the hell archetype is the image of the death and regeneration. On the one hand, the hell archetype is the death instinct, the destroying, the negative spirit distortion, and the descending power of the consciousness and the destroying is a kind of change, i.e. the reconstruction. On the other hand, it is the positive spirit distortion, the growth of the life, and the rising power of the consciousness. Lacan said, only to destroy ego could generate ego. The acousma corresponds with the hell archetype in following aspects. First, to be understood in the acousma corresponds with to be irradiated by the mirror in hell. Second, the shadow floating upward and the review of the history in the acousma correspond with the shadow floating upward of the mirror in hell and the review of the history. Third, the nakedness in the acousma corresponds with nakedness in hell. Fourth, the discussions and judgments in the acousma correspond with the discussions and judgments in hell. Fifth, to be murdered in the acousma corresponds with the excruciation and suffering in hell. Sixth, in the acousma, the awakening of the consciousness, i.e. the descending of the agglomeration and consciousness to the unconsciousness corresponds with the dispersing and generating cycle of the consciousness that the birth is the death and the death is the birth in the excruciation in hell. The excruciation indicates the drawing and function of the power to the consciousness, and the chewing of the power is contained in the identity of the positive and the negative about discussion of the acousma, and to keep the awakening of the consciousness and the descending of the consciousness in the murdered pain is to draw and function with the consciousness by the power, and there are two powers to function on the self-consciousness obviously like a tug-of-war, which is the attacking function to press the energy. The hell archetype has identical function structure of the power to the consciousness with the acousma model, and the hell course is identical with the acousma course. The hell course possesses the features such as controlling, invading and destroying, and it depends on the archetype, and is decided by the archetype, but the archetype is invisible, and it is expressed and experienced in the projection, which is the function of the rising power and the descending power of the consciousness. In the hell, the birth is the death and the death is the birth, which indicates that the consciousness experiences the uncertainty of the life-force and the death-force, and gestates the renascence and the death. In the acousma, the identical discussion about the positive and the negative is just the uncertainty of the consciousness, and the weak consciousness is attracted by the gravitation to return to the unconsciousness, and the decomposition loses certainty, orientation, and the ability of the differentiation, and the ego is experienced as others or materials, which is the initial stage of the consciousness. The consciousness struggles from the unconsciousness, and the original projection makes the psychological potential unconsciousness to become conscious, and makes the consciousness to drive the course of the consciousness. The certainty and the orientation to reconstruct the consciousness make the consciousness differentiation to gain the independence. The hero (means the consciousness)'s sailing archetype in the dark sea is the battle about the hero and the dragon. Only the dragon is killed symbolically, the consciousness can grow to be independent and struggle from the psychological gravitation. The image of the hell is collective, and it is meaningful to understand the acousma. In the review of the individual experience, the shadow appears, enters into the self-consciousness, and the attention of the consciousness is absorbed by the shadow which is the symbol that the consciousness is dispersed, the symbol that the consciousness is attracted by the gravitation and drawn into the dark, the symbol that the energy is blocked and inflated in the unconsciousness, the symbol that the energy is depressed, and the symbol that the attacking is depressed and the energy needs to be released. In the acousma, the shadow has the feature of absorption, and it can not only agglomerate the consciousnesses, but make the consciousness dispersed and descended to be the unconsciousness, and the consciousness is devoured. The back of the shadow is the gravitation which can agglomerate and disperse the consciousness. The hell is in hiding, and it shows the original and concealed features of the power, and the dark course of the consciousness. And the hell is the refining of the consciousness. "The consciousness comes from the symbol", "the consciousness can not create the symbol which is the self-expression of the unconsciousness, and the self-consciousness absorbs and assimilates the unconscious contents by the symbol and builds the consciousness, and the symbol is associated approach between the ego and archetype, the consciousness and the unconsciousness", and by the symbol, "starting from a kind of blind and pure unconscious psychology without image in the remote antiquity without form, human consciousness achieved the forming stage of the consciousness, and the image creation in this

stage is the basic premise that the consciousness happens and develops". In the agglomeration of energies, the consciousness is differentiated from the unconsciousness, and the symbol in the acousma is to differentiate and agglomerate the consciousness, but because of the deceptive function of the acousma when the power releases, the energy is dispersed like the cyclone to make the consciousness to become unconscious, and make the self-consciousness become into the segments and fragments. The consciousness is driven by the power, and gains the certainty and orientation, and is not differentiated anymore. The acousma is the product that the power works, and the function of the power generates abundant energies which breaks the depression and disperses to make the unconscious consciousness to become into dissident consciousness, and it is the acousma that the dissident power attacks the projection of the self-consciousness. The attacking energy not only agglomerates but disperses the consciousness, and generates the self-consciousness, and it not only protects me, but makes me disappear to avoid generating depression, and tries hard to rebuild me, and it repeats this process in the uncertainty, and loses itself in the shade which is the symbol that the attacking energy needs to be released. In the shade, the attacking and self-destruction can be performed, and to depress the self-attacking of the energy drives persecutory delusion.

Why the power is generated? The hell archetype has the same structure with the observation and discussion mode of the consciousness, and the image of the archetype becomes into the image of the social environment, and it becomes "visible", and the image of the archetype is projected into the exterior, into the society, culture, consciousness, and the object and mirror reflection of the social relationship, and the hell archetype is the accumulation of the history, and it exceeds the space and time, and it is stable, and can be indicated by the myth symbol. The observation and discussion mode is current, social and environmental, and it is indicated by the current symbol of environment and culture. No matter how the current culture changes, the structure is invariable and stable, and though the individual experience and culture will multiply and strengthen this projection, but to discard the individual background possesses the same structure and the meaning of the archetype, which can not get rid of the original power. In the beginning, we didn't know the problem came from us, but blame the exterior environment. In fact, it is the accumulation of the projection of the power devouring, the projection of the collective archetype and the projection of the individual unconsciousness. The destroying and invading of the power are projected on the attacking invading mode of the current environment, culture and consciousness, and the fear to the power is projected as the fear to others, and the destroying and invading of the interior are projected as the persecution to us by others. The attacking of the interior power is projected as the exterior attacking, and is experienced as being murdered.

The hell archetype is the symbol of the distortion of the unconscious spirit, the transformative case, and the furnace of the consciousness, and "by the pain and death, the offering and the body will achieve updating, rebirth and immortality with the vanishing of the soul". "By a profound form, the birth and rebirth are associated with the death and destroying for ever". "When the consciousness develops less, it will more return to the unconsciousness and draw the energies to develop the consciousness, i.e. the super-individual power is used to confirm the relationship between the self and the environment, and when the consciousness and the rational goodness has not developed to the state that they are decisive, the man will return to the unconscious wisdom full of inspirations, and drive the course of the consciousness, and the consciousness symbolically regards the unconsciousness as the female and regards itself as the male", "the researches of the depth psychology indicated that the consciousness and its skills are the latter, and they are the "son" of the unconsciousness, but the development of the personality of the human integer and individual will certainly depend on the spiritual power in the unconsciousness for ever", "in another words, the occurrence of the rebirth can sleep in the cave of the dark, travel in the ghostdom and the hero's sailing archetype in the dark sea (the unconscious travel of the consciousness, i.e. the travel of the dark)", and only if the death of the old personality may induce the rebirth. This process of "pondering" encounters with the archetype group of the "great mother", and the hell archetype is one of the symbols of the "great mother", and the "great mother" is the image of the psychological gravitation and the symbol of the unconscious differentiation. And she lives in the hearts of modern people. "The distortion should happen in the container, and the hell is the uterus, and it performs the female principle, and the hell is like the container of the death, the negative aspect of the birth, and it is also the container of the birth, and the positive aspect. To be rebirth and birth from the death by offering, separating and tearing up". The hell is the unknown projection of the psychological dark, and the myth symbol drives the differentiation of the unconsciousness, and the generation of the power is to agglomerate, disperse and destroy the consciousness. The archetype studies the myth, is described by the myth, and it can express the libido lively, and in the occurrence theory, the current is the past, and they are identical.

How the power is released and sublimate, i.e. how the acousma is weakened and eliminated? "In the relationship between the ego and the unconsciousness, a "gravity function" can be observed, and it is a kind of tendency that the ego returns to the original unconscious state, and this kind of tendency is negatively proportional with the ego and the consciousness. When the load of the conscious energy is stronger, there are more libidos to be utilized by the self wills and interests, and the inertia of the gravity function is smaller, and the consciousness and ego is weaker, and the psychological gravity to return to the unconscious state is stronger, and here, the ego and consciousness has not developed enough to resist the gravity function, and like the primitive people or children, they may be harmed by the

diseases, tiredness and other invasions". The acousma is the result of the process that the consciousness is drew into the unconscious black hole and declined as the unconsciousness by the large "psychological gravitation", and generates a mass of energies which are dispersed by the depressive and devious way, and the power activates the consciousness and generates the projection of the delusion. Under the function of the gravitation, the consciousness is descended as the unconsciousness, and the consciousness responds with the unconsciousness, and the energy is closed in the archetype of the unconsciousness, and "by the interior insight, the life-force of the libido is found, and the shades of the psychological gravitation and the unconscious archetype are shucked off, and the unconscious contents and conflicts, the function of the power and the depressed energy are realized, and the consciousness is opening to the unconsciousness, and it makes the unconsciousness to climb the consciousness and makes the consciousness to realize the contents of the unconsciousness and break the depression, and the libido flows to the consciousness, strengthens the consciousness, and the consciousness combines the archetypes and releases the blocked energy, which can naturally weaken and eliminate the acousma, and the blocked energy is the destroying energy, and by the transformation of the energy, the life-force can be obtained from the unconsciousness, so the rebirth is realized from the death". "This relationship is not presented as a kind of drive in the psychology, but a kind of symbol process, and the image and the symbol are closer to the unconscious layer, not the conscious layer, but the course happening on the symbol layer always has a kind of predictive feature, and it can make the latter consciousness course possible". So the cure of the acousma is possible. "The human spirit begins in the emphasis of the symbol image full of illusions, and finishes in the abstract concept". "The unconsciousness can not only harm us by uncontrollable power full of instinct and drive, but also help and save us". This is the process thorough continually understanding, adapting, bearing, releasing, hammer-hardening and subliming the power and it is the course to weaken and eliminate the acousma and thoroughly understand the experiences, and the atman must understand the unconsciousness and the archetype.

The attraction of the psychological gravitation is also the call from the heart, and it presents the association of the depth heart and the ego, and it pursues the gravitation, and it enhances the libidos and the unconsciousness, and it releases and sublimes the energy in the archetype, and it is projected into the consciousness and the exterior world. It adapts the exterior by adapting the interior, and it can associate with the exterior by associating with interior, and the psychological gravitation is the drive of the consciousness, and it forces us to explore it, and it is inevitable, and it expands its self-consciousness, and makes the ego to go to the independence and the growth, and makes the libido psychological potential to be realized, and realizes the spiritual feature and the corporality of the life-force. The agglomeration of the libido makes the self-consciousness to be agglomerated, realizes the integration of the spirits, and the self-consciousness possess the features such as integrality and stability, and the libido will not be emanative, and the energy in the unconsciousness is boiling "a boiler of water", and it will surge forward like a wild horse. The boiling water under the boiler cover will become into the steams which transgresses around. The self-consciousness will not be emanative anymore, and it is agglomerated to be stable, and it will not float in the wind, and it has the features of certainty and orientation, which can weaken and eliminate the acousma and realize the individuation.

References

Erich Neumann (German). (1998). *The Great Mother: An Analysis of the Archetype.* Beijing: Oriental Press. Sep, 1989.

The Characteristics of Initial Sandplay

Productions of 44 Undergraduates

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Abstract

Objective: To investigate the undergraduate's initial sandplay themes. Method: Each subject made initial sandplay with the company, then share the feeling about his own initial sandplay. Result: The theme in sandplay of undergraduates about family and life is about 63.7%; different kind of miniatures was used with different frequency by every subject; there are 54.55% initial sandplay have real self-image,all of the initial sandplays have not used the water, and the time that everyone used on making their initial sandplay has significance of difference.

Keywords: Sandplay, Initial sandplay, Theme

The sandplay, based on analytic psychology principle of C.G.Jung. Mental healing method established by D.Kalff, which develops rapidly in recent years and widely applies in the psychological consultation, the mental healing, the human resources development, the psychological education and so on. Many domains. Sandplay subject analysis existing research including to special community (Undergraduates lonely crowd, junior middle school test anxious crowd and so on)and different school age student sand play work characteristic analysis, but are also few to the initial sand play research .The visitor in makes the sandplay in the process, does first sandplay named initial sandplay (CAI,2005) No matter is the sandplay founder D.Kalff or the present sandplay therapist, all gives the initial sandplay special attention and the analysis in the actual operation. In 1986, Kalff pointed out in "Introduction to Sandplay" that the sand play game course of treatment is a process which an unconsciousness launches gradually. The initial sandplay is usually the closer consciousness stratification plane, but, the initial sandplay also can reflect some questions .Based on studies done both at home and aboard, the present author attempts to investigate the initial sandplay characteristic of the undergraduates.

1. Subjects and Methods

1.1 Subjects

The current study selected 44 undergraduates. Of all the students, 8 were male one, and 36 female students.

1.2 Instruments

1.2.1 The specification is 57 centimeters*72 centimeter *7 centimeter sandplay; The sandplay inside and the bottom surface spread the blue color; Which loaded with purely, exquisite beach sand.

1.2.2 Vessel

1.2.3 Miniatures

Altogether has more than 1200, divides into (1) building class, including house, bridge, tower, and so on; (2) character class, including religious figure, each kind of professional character, family character and so on; (3) animal class, including tames the animal, the wild animal, the marine animal prehistoric animal, the insect and so on; (4) plant class including each kind of trees, flowers and plants, mushroom and so on; (5) furniture lives at home the kind, including furniture, table ware, umbrella, candle and so on; (6) culture class, including Chinese culture, Egyptian culture, Judea culture, European culture, India peaceful culture and so on; (7) natural material class, including cobblestone, gem, shell, coral and so on; (8) food class, including cake, fruit, small cage package and so on; (9) transportation vehicle class,

including airplane, automobile, steamboat;(10) other, including hour glass, ring, bracelet and so on.

1.2.4 Recording tool: digital camera

1.2.5 Research process

After the test go into sandplay room, the consultant used instruction language to its introduction sand play game,

You may put hands on the sandstray to feel the feeling; The sand has different category, you may choose the use willfully; The sand divides into dry sand and moist sand: The dry sand feels quite comfortably, it has better fluidity ;The wet sand easy to model the shape; The test may pour water in the sandplay.

After sand play manufacture conclusion, they share the sandplay together; The consultant take a simple record for the character of the sandplay , after the consultation had ended, supplemented the recorded information, photographs for sandplay.

2. Data analysis

2.1 The Themes

Insert Table 1 here

Family and life condition these two subjects with a percentage of 63.7%, only 1 of the 28 initial sand play work about the family the life condition is the realistic family life restoration, other 27 examples express the future family life or the ideal life condition, the Undergraduates described the family and the future as good environment , safe, abundant, and harmonious, only 1 Undergraduates described family as living in the challenging environment. Has not appeared the researching result of Erikson: Undergraduates' sand play subject related with their childhood experience , the findings consistent with Yi Chun Li's.(YI,2003,PP.223-228)

2.2 Various categories miniatures service condition

Insert Table 2 here

The results of the present study by table 2 show that in each kind of miniatures, The building class, character class, animal class, plant class, transportation vehicle class, furniture lives at home have relatively high use frequency, for example in 97.73% initial sand plays has the building class , in 86.36% initial sandplay has the character class , these can express the subject better: Family, happy environment.

2.3 self-image, use of sand and water.

The initial sandplay productions of 44 students show that:24 initial sandplay productions have real self-image, accounting for 54.55%;3 initial sandplay productions have unreal -self image, accounting for 6.82%;17 ones have none self-image, accounting for 38.64%.

25% of the students have significant move sand in the process of making sandplay,39%of the students move mall-scale sand;36%of the students never move the sand.

The sand of 44 initial sandplay productions are all dry.

2.4 The use of time

The average for making a sandplay is 25 minutes. However, large individual differences, the shortest is 6 minutes, the longest is 60 minutes.

3. Discussion

3.1 The Theme

In this research Undergraduates' initial sand play's theme many are about family and life condition .And in these sandplays are many to family member's description. The Undergraduates have strong sense of responsibility to the family. Think they should take the responsibility for taking care of the family.

According to Erikson's personality theory, We can see there is 8 stages of personality development, and that the different stage has the respective development duty and forms the different personality characteristic, the Primary mission of early adulthood (18-25 years old) is Obtains the intimate feeling, avoids the lonely feeling. This stage forms the good personality characteristic is a good quality of love. The Undergraduates is in this kind of special period. In the 44 initial sandplay of Undergraduates. Through in Bridegroom and bride, elderly couple, mandarin duck, butterfly, fish and so on to express the romantic relations is account for 25%, the romantic relations expressed their longing for a better love and blessing.

3.2 The usage of wet or dry sand and water

During the introduction of doing sandplay, the counselor tells clients they can use wet sand, but 44 of them still choose dry sand. The following are possible reasons: undergraduates are good at symbol meaning, 64% of them use blue

bottom to represent water; undergraduates are good at standing in others' views and thinking. They think it's so boring for counselor to clean up it, if they use wet sand. So, they choose dry sand to do their sandplay.

3.3 Self-image

During the process of looking for self-image, the counselor let clients feel their mental states. Why it's so different when they do it? Some of them in a low speed, some with a lot of hesitation, some find it at first sight? What kind of feeling do they get unconsciously? The counselor let clients share their feelings about their self-image. The most important part is let them pay attention to some aspects of their self-image to get their feelings at that moment, including the figure, expression, movement and the position of it in the sandplay. In this research, 54.55% clients show their real self-image in their first tray. We can conclude that undergraduates realize themselves specifically, or we can say that they know about themselves to a certain extent. We hope that they can know themselves more deeply in the later process of doing sandplay.

3.4 State of moving sand

In this research, 36% clients didn't move sand. According to some relevant research, moving sand or not has different meanings. The bottom of sandplay is blue, in general, it represents water and water is the symbol of unconsciousness. Moving sand may represent clients explore their unconsciousness actively otherwise it means clients are still at their conscious level. So, they need do some further effort about their self-exploring (LI, 2005, P.180). Only when clients start to explore their unconsciousness actively, sandplay can show its function and their unconsciousness can emerge automatically.

References

Cai, Baohong. (2005). *A Study on the Initial Sandtray and Diagnostic Measure*. Guang Zhou: South China Normal University, (Chapter 1).

Li, Jiangxu & Sheng, Heyong. (2005). The Formation and Application of Sandplay Therapy. *Science of Social Psychology*, 20, 180-180.

Yi, Chunli & Hu, Peicheng. (2003). The Themes and Symbolic Interpretation in Sand Play of Undergraduates. *Chinese Mental Health Journal*, 4, 223-228.

Table 1. 44 initial sand play subject constitutions

sand play subject	quantity	Percentage (%)
family	16	36.4
life condition	12	27.3
grow path	1	2.3
sightseeing traveling	5	11.4
interest(hobby)	4	9.1
non-reality	4	9.1
others	2	4.5

Table 2. Various categories miniatures service condition

Miniatures type	Use proportion (%)	mean value
building class	97.73	5.11
plant class	88.64	4.30
animal class	95.45	4.32
character class	86.36	5.03
food class	56.82	2.34
furniture class	72.73	3.89
culture class	59.10	1.82
Transportationvehicle class	75.00	1.80
natural material	63.64	1.91
others	29.55	0.59

The Relationship between Self-Concept and Communication Skills towards Academic Achievement among Secondary School Students in Johor Bahru

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Abstract

The article reviews empirical studies which emphasize that the relationship of self-concept and interpersonal communication skills to academic achievement. 320 students from eight schools in Johor Bahru were picked at random using the simple random method. The assessment instruments used in this study were the "Tennessee Self–Concept Scale" (TCS) and "Interpersonal Communication Skills Inventory" (ICSI). The reliability level of the assessment instruments is 0.7498 (TSCS) and 0.7587 from the pilot study done on a group of twenty respondents. The data was analyzed using the Pearson's correlation and descriptive statistics. The students' levels of dimension of self-concept (physical, personal, moral and ethic, behavior, social satisfaction and identity) and interpersonal communication skills were identified. The students' PMR examination results were used as the academic achievement indicator. The results indicated that the majority of the students possessed the moderate level of self-concept and interpersonal communication skills. Self-concept was found to correlate quite significantly with interpersonal communication skills but it was found that self-concept does not correlate significantly with academic achievement. Suggestions were put to improve the students' interpersonal communication skills and their self-concept. One of the suggestions is that communication skills should be introduced as a subject in the school curriculum from the primary level. This will not only develop a student's self-confidence but also enhance his self-concept.

Keywords: Self-concept, Interpersonal, Communication skills and academic achievement

Introduction

Self-concept refers to the totality of a complex, organized, and dynamic system of learned beliefs, attitudes and opinions that each person holds to be true about his or her personal existence. Parental upbringing, continuous failure, depression and internal self-critic are factors that influence the development of one's self-concept. A positive self-concept can be developed through behave objectively in knowing oneself, always appreciate oneself, be friend to oneself and always have a positive and rational thinking. Educational psychology can be referred to a distinct scientific discipline within psychology that includes both method of study and a resulting knowledge base. It is believed that the development of student's self-concept depends on the focus of educators in educational psychology in classroom practice. Educational psychology provides important background knowledge that pre-service and in-service educators can use as the foundation for professional practice. A positive self concept can contribute to good academic achievement by student's optimistic personal expectations about himself or herself.

There are a variety of ways to think about the self. The most widely used term is self-concept and generally refers to the totality of a complex, organized, and dynamic system of learned beliefs, attitudes and opinions that each person holds to be true about his or her personal existence.

Franken (1994) states that "there is a great deal of research which shows that the self-concept is, perhaps, the basis for all motivated behavior. It is the self-concept that gives rise to possible selves, and it is possible selves that create the motivation for behavior" We develop and maintain our self-concept through the process of taking action and then reflecting on what we have done and what others tell us about what we have done. We reflect on what we have done and can do in comparison to our expectations and the expectations of others and to the characteristics and accomplishments of others. That is, self-concept is not innate, but is developed by the individual through interaction with the environment and reflecting on that interaction.

There are a several different components of self-concept: physical, academic, social, and transpersonal. The physical aspect of self-concept relates to that which is concrete: what we look like, our sex, height, weight, etc.; what kind of clothes we wear; what kind of car we drive; what kind of home we live in; and so forth. Our academic self-concept relates to how well we do in school or how well we learn. There are two levels: a general academic self-concept of how good we are overall and a set of specific content-related self-concepts that describe how good we are in math, science, language arts, social science, etc. The social self-concept describes how we relate to other people and the transpersonal self-concept describes how we relate to the supernatural or unknowns.

Students generally strive for academic excellence. Success or failure in the academic arena can be either a good or bad experience for a student. Academic performance is in general the yardstick used to measure the personal success of an individual. Academic excellence in public examinations such as the PMR (Lower Secondary Assessment) for instance is the success indicator of a student. Excellent academic performance is the hope and pride of each and every student. Besides, it is also the hope of parents, teachers and educational institutions at large (Azizi et.al. 2009, Claes, M., Lacourse, E., Bouchard, C., & Perucchini, P. 2003).

It is the norm for society and educational institutions in Malaysia to promote academic excellence through cognitive ability and learning style or IQ (mental intelligence). Binder, Jones and Strogwig (1970): Thorndike and Hagan, 1969 in Watson and Monroe (1990) show that there is a 0.50 to 0.70 relationship between IQ and academic achievement. They stated that 50 percent of the variable in academic performance could be forecast through IQ.

Self–concept (physical, personal, moral and ethic, behavior, social satisfaction and identity), interpersonal communication skills and academic performance can be considered as three separate components. It is easy to assess a student's academic performance through the grade achieved in tests and examinations. However, assessing a student's self–concept which involves feelings and perceptions of an individual is much more subjective and thus a more difficult task. Interpersonal communication skills of an individual are easier to assess as a student's ability to communicate can readily be determined by the way he interacts with his teachers and peers. However, it is not an easy task to assess the level of interpersonal communication skills of a student as the interaction between students and their peers and students and their teachers occurs only in the classroom in the school (Claes, M., Lacourse, E., Bouchard, C., & Perucchini, P. 2003).

It is essential for an individual to acquire interpersonal communicational skills to communicate, discuss and exchange ideas effectively with his teachers and peers (Downey, Meriel. 1977). With the current trends in the school system, which emphasizes the student's ability to express him in the teaching and learning process, it is mandatory that a student acquire interpersonal communication skills. A student who lacks interpersonal communication skills will not only experience problems communicating but also during the learning process as discussion forms the very basis of today's teaching and learning process (Azizi Yahaya., & Kamaliah Nordin, 2006). This inadequacy will indirectly erode a student's confidence and self–concept thus affecting his academic performance.

Excellent academic performance is the main target of every student and school. For excellent academic performance, a student ought to acquire an understanding and a grasp of the subject content. This process of acquiring a command and an understanding of the subject content does not depend on merely on memory work but on the level of self–concept and the ability to interact effectively. A high level of self–confidence coupled with effective learning techniques will lead to excellent academic performance. Self–concept and interpersonal communication skills form the basis of self–confidence.

A student's confidence and the ability to express him and interact in the classroom are closely related to self–concept. According to Coyle (1993) and Gergen, Kenneth J. (1971). The ability for interpersonal communication will affect the self–concept of an individual. A student assesses himself by the perception that the teachers have of him. This perception is based on his ability to interact with others in the classroom. Teachers tend to give good assessment to students who interact well in the classroom. This in turn increases their self–confidence leading to a higher level of self–concept.

The current democratic teaching style encourages students to interact with the teachers as well as their peers in the classroom. The interpersonal communication skills the students possess make them more self confident and indirectly influence their academic performance.

Problem Statement

It is not that students do not have ideas or do not know how to answer the teacher's questions, but it is their inability to express themselves due to their lack of communicational skills and the lack of courage for fear that they will be assessed by their teachers and peers especially if their opinion is not accurate and fails to meet the teacher's requirements (Martinot, Delphine and Jean–Marc Monteil, 2000).. This situation is the result of the lack of interpersonal communication skills of a student and a negative or low level of self–concept.

It is essential for a teacher to understand the level of self–concept of a student in order to employ an effective approach during the teaching and learning process, for instance when questioning students. Besides, communicating in the classroom plays an important role in shaping a student's self–concept (Barnes, Doughlas & Frankie Todd, 1977). A student with communication skills can communicate effectively with his teachers and peers both inside and outside the classroom.

Research Objective

This study focused on the relationship between self-concept and interpersonal communication skills to academic achievement. Other than that this study also try to find out the students' levels of dimension of self-concept such as physical, personal, moral and ethic, behavior, social satisfaction and identity and interpersonal communication skills

The Significant of the Study

This study hopes to benefit teachers who play an important role in building a student's interpersonal communication skills especially during the teaching and learning process in the classroom (Weaver II, Richard. 1996).. A teacher is able to formulate a suitable approach to improve a student's interpersonal communication skills after having identified his level of self–concept.

Parents too can help their offspring's level of self–concept and interpersonal communication skills by paying more attention to their children at home and encouraging them to improve their academic performance (Barnes, Doughlas & Frankie Todd. 1977).

The Ministry of Education can plan strategies to improve students' self–concept and interpersonal communication skills through the curriculum and education syllabus in school to ensure excellent academic performance. It is hoped that with elements of interpersonal communication skills will integrated into the learning process by the Ministry of Education. In time, it will be across the curriculum as it is the case of moral values and critical and creative thinking skills.

Limitation

The self–concept dimensions used in this study cover; the physical self–concept, moral ethic self–concept, personal self–concept, family self–concept, social self–concept, behavioral   self–concept, identity self–concept and satisfaction self–concept. The study also focused on the level of self-concept such as negative/low, moderate and positive/high self–concept are also looked into as these will have an impact on academic performance and an individual's ability to communicate. All self–concept dimensions mentioned above are interwoven into the questionnaire.

The study samples are limited to form four students as they have taken the PMR examination which is the indicator for academic achievement in this study. Random samples have been taken from ten schools in the Johor Bharu area.

Research Design

This study was carried in the form of a descriptive survey focusing on the relationship of self–concept and interpersonal communication skills with academic achievement among the form four students of several schools in the Johor Bharu area.

This survey serves to explain the correlations between self–concept with academic achievement and the relationship between interpersonal communication skills and academic achievement. A pilot study was carried out to test the validity and reliability of the instruments used for the actual survey. The data was collected via a questionnaire administered by the class teacher to the respondents (Azizi Yahaya, Shahrin Hashim, Jamaludin Ramli, Yusof Boon & Abdul Rahim Hamdan, 2006).

Population and Sample

There are a total of 10,694 form four students from 39 government–aided schools in the Johor Bharu District. Out of this, a total of 370 students from 10 different schools were picked randomly as study samples. The sample size of 370 was determined by the Table for Sampling Purposes by Krejcie and Morgan (1970).

Pilot Study

The aim of the pilot study was to test the validity and reliability of the questionnaire used in the actual study. 20 students who were not the actual respondents were picked at random from a chosen school. The outcome of the pilot study shows that a few items in the questionnaire had to be improved due to the comment from the respondent and the

item show from the reliability test. The outcome of the reliability of section B of the questionnaire was 0.7498 while section C is 0.7587 (Azizi Yahaya, Shahrin Hashim, Jamaludin Ramli, Yusof Boon & Abdul Rahim Hamdan, 2006).   .

Data Analysis

The correlation analysis was used to examine the correlations between the variables in the study namely the relations between self–concept and interpersonal communication skills with academic achievement as well as the relationship between self–concept and interpersonal communication skills with a student's background and academic achievement.

To test the hypothesis that was put forth, the analysis of correlation was used because the entire hypothesis examined only the relationship between the variables. A significant level of 0.05 was determined to test the hypothesis. According to Azizi et.al (2007), the significant level usually employed in the study of social sciences is 0.05.

Finding

The findings of the study are tabulated to show the percentage of frequency. The details are presented in accordance to the sequence in the survey. This chapter also tests the study hypothesis to determine the acceptance or rejection of the null hypothesis. The level of significance used to determine the acceptance or rejection of the null hypothesis at 0.05.

Analysis of the Level of Total General Self-Concept

INSERT TABLE 1 ABOUT HERE

The findings on self-concept as a whole shows that of the 320 respondents,317 or 99.1% possessed the moderate level of self-concept, 3 or 0.9% possessed   the positive or high level of self-concept while non of the respondents possessed the low level of self-concept.

Analysis of the Level on Physical Self-Concept

INSERT TABLE 2 ABOUT HERE

The findings show that the physical dimension of self-concept was mostly at medium level whereby 267 or 83% out of 320 were included in the moderate category.

53 respondents or 17% had positive levels of physical self-concept while none of the respondents had negative self-concept.

Analysis of the Level on the Moral Ethics Self-concept

INSERT TABLE 3 ABOUT HERE

The study shows that the Moral Ethics of respondents as a whole was at the moderate level in those 305 respondents or 95% possessed this self-concept. 15 respondents or 5% were at the negative level, while none of the respondents were at the positive level of the moral ethics concept.

Analysis of the Level of Personnel Self-Concept

INSERT TABLE 4 ABOUT HERE

The findings of the study on Personal Self-concept shows that 15or 5% of respondents possessed the positive level of personal self-concept, 305 or 95% at the moderate level while non of the respondents possessed the low level of personal self-concept.

Analysis of Family Self Concept

INSERT TABLE 5 ABOUT HERE

The table shows the findings of the respondents' level of the Family Self-concept. 138 respondents or 43% had the positive level of family self-concept, 3 or 1% had the negative level family self-concept while 17 9 or 56% have the moderate level of family self-concept.

Analysis of the Level of Social Self-Concept

INSERT TABLE 6 ABOUT HERE

The findings of the study shows that 30 respondents or 9% possessed the positive level of social science self-concept, 280 or 88% of respondents possessed the moderate level of self-concept and 9 or 3% possessed the low level of self-concept.

Analysis of the Level of Behavioral Self-Concept

INSERT TABLE 7 ABOUT HERE

The table 7 shows that 123 or 53% of respondents possessed the positive level of behavioral self-concept, 192 or 60% at the moderate level of behavioral self-concept and 5 or 2% possessed low levels or negative behavioral self-concept.

Analysis of the Level of Identity Self-Concept

INSERT TABLE 8 ABOUT HERE

The findings shows that 22 respondents or 7% were at the positive level of Identity self-concept, 267 or 84% at the moderate level and 29 or 9% at the low level.

Analysis of the Level of satisfaction Self-Concept

INSERT TABLE 9 ABOUT HERE

Table 9 shows that 44 or 14% of the respondents were at the positive level of satisfaction self-concept, 249 or 78% were at the moderate level while 27 or 8% of respondents were at the negative level of self satisfaction concept.

Analysis of the Level of Interpersonal Communication Skill Self-Concept

INSERT TABLE 10 ABOUT HERE

The findings on the level of Interpersonal Communication Skills shows 46 or 14.4% of the respondents were at the high level of Interpersonal Communication Skills, 272 or 85% were at the moderate level while 2 or 0.6% were at the low level of Interpersonal Communication Skills.

Analysis of the Relationship between Self-Concept and Interpersonal Communication Skill Self-Concept

Hypotheses Testing

The Pearson Correlation Analysis is used to test the acceptation or rejection of the null hypotheses as the hypotheses was put forth to show only the relationship between variables in the study.

Testing Null Hypotheses One: There is no significant relationship between self-concept and interpersonal communication skills.

INSERT TABLE 11 ABOUT HERE

The findings of the correlation analysis show that there is a significant relationship between self-concept and interpersonal communication skills where r=0.239, P<0.01.

Therefore, the first null hypotheses which stated that there is no significant relationship between the self-concept with interpersonal communication is rejected.

Testing Null Hypotheses Two: There is no significant relationship between self-concept and academic achievement.

INSERT TABLE 12 ABOUT HERE

 The analysis shows that there is no significant relationship between self-concept and academic achievement. The relationship shows a low inverted relationship or r=−0.56, P<0.317.This means that the null hypothesis which states that there is no significant relationship between self-concept and academic achievement is accepted.

Testing Null Hypotheses Three: There is no significant relationship between interpersonal communication skills and academic achievement.

INSERT TABLE 13 ABOUT HERE

Table 13 shows that there is a significant relationship between interpersonal communication skills and academic achievement although the relationship between the two is weak or r=−0.146, P<0.000. Therefore, the null hypotheses are rejected and the alternative hypotheses that there is a significant relationship between interpersonal communication skills and academic achievement are accepted.

Testing Null Hypotheses Four: There is no significant relationship between parent's Commitment with self-concept and academic achievement.

INSERT TABLE 14 ABOUT HERE

There is clearly a significant relationship between the parent's Commitment and academic achievement although the relationship is weak that is r=0.260, P<0.000. The relationships between parent's Commitment and self-concept shows a significant but weak negative correlation that is r=-0.111, P<0.48. Therefore, the null hypotheses which state that there is no significant relationship between parent's Commitment with self-concept and academic achievement is rejected.

Testing Null Hypotheses Five: There is no significant relationship between parent's Commitment with interpersonal communication skills and academic achievement.

INSERT TABLE 15 ABOUT HERE

The correlation analysis shows that the null hypotheses that states there is no significant relationship between parent's level of education with interpersonal communication skills and academic achievement is accepted. This is because there is no significant relationship between parent's level of education and interpersonal communication skills although the relationship is weak that is r=0.1396, P=<0.13.

Although the relationship between parent's level of education and academic achievement is weak, there is a significant relationship between the two or r=0.260, P<0.000. Thus the hypotheses is accepted

Testing Null Hypotheses Six: There is no significant relationship between parent's income with Self-concept and academic achievement.

INSERT TABLE 16 ABOUT HERE

The parents' income and academic achievement shows a significant but weak relationship that is r =0.242, P<0.000. The null hypotheses is therefore, rejected. On the other hand, the relationship between the parents' of income and self-concept does not show a significant relationship that is r=0.150, P>0.792. The hypothesis is therefore accepted.

Testing Null Hypotheses Seven: There is no significant relationship between parents' income with interpersonal communication skills and academic achievement.

INSERT TABLE 17 ABOUT HERE

The correlation analysis shows that there is a significant relationship between parents' income with academic achievement however the relationship is weak that is r=0.146, P<0.000. The relationship between parents' income and interpersonal communication skills also shows a significant but weak relationship that is r =0.242, P<0.000. The hypothesis is therefore rejected.

Testing Null Hypotheses Eight: There is no significant relationship between a student's position among siblings with self-concept and academic achievement.

INSERT TABLE 18 ABOUT HERE

There is a weak, negative and insignificant relationship between a student's position among siblings and self-concept that is r =-0.035, P<0.527. The null hypotheses is therefore, accepted. The relationship between a student's position among siblings and academic achievement however shows a significant but weak and inverted relationship that is r =-0.129 P<0.021.Therefore, the null hypotheses is rejected.

Testing Null Hypotheses Nine: There is no significant relationship between number of siblings with interpersonal communication skills and academic achievement.

INSERT TABLE 19 ABOUT HERE

The correlation analysis shows that there is no significant relationship between numbers of siblings with interpersonal communication skills. It also shows a weak relationship that is r =0.027, P<0.633. The number of siblings and academic achievement show an inverted and insignificant relationship that is r =-0.039, P<0.488. Thus, the null hypothesis is rejected.

Conclusion

The outcomes of the survey shows that all the objectives were fulfilled and the survey was satisfactory as no objective was overlooked in the study. All the hypotheses put forth were tested and shows that four null hypotheses as followed were accepted (1) There is no significant relationship between self-concept and academic achievement. (2) There is no significant relationship between the positions of a student among his siblings ands self-concept. (3) There is no significant relationship between parents' income and self-concept.. (4) There is no significant relationship between the total number of siblings with interpersonal communication skills and academic achievement.

On the whole, the outcome of the study shows that there is a weak relationship between the variables put forth in this study. The outcomes of the study shows unexpected results namely there is no significant relationship between self-concept and academic achievement: there is no significant relationship between the total number of siblings and interpersonal communication skills: and between the total number of siblings and academic achievement (Barnes, Doughlas & Frankie Todd, 1977).

Students, on the whole, have a moderate dimension of self-concept. The dimensions of self-concept that a student possesses a second place which have a positive/high outcome include physical self-concept, family self-concept and behavioral self-concept. This is because the above mentioned self-concepts are positive compared to other which is in the third place (low level) of self-concepts like moral ethic self-concept, social self-concept, identity self-concept, satisfaction self-concept and personal self-concept as the numbers of students who possess positive self-concept in these dimensions are small. However, the levels of the above self-concept are on the whole moderate.

The level of interpersonal communication skills a student possesses is generally moderate although there are a few students who possess good communication skills.

The relationships between self-concept with interpersonal communication skills have shown positive results as there is a significant relationship between the two. However, there is no relationship between academic achievement and self-concept.

It can therefore, be concluded that the outcomes of the study shows a positive result which represented a total of 320 respondents in the area of Johor Bahru who have fulfilled the requirement of the minimum sample number to produce a reliable outcome of the study.

Recommendation

Self-concept and Interpersonal Communication Skills are two elements which direct or indirectly influence the life of an individual. The researchers therefore propose these suggestions:

1.   The Ministry of Education or The State Education Department draws up a plan where a subject on interpersonal communication skills is included in the school education syllabus.

2.   Teachers are given the exposure on the importance of interpersonal communication skills. They are to attend courses, workshops, or seminars on interpersonal communication skills. It is vital that this step is taken because these teachers will direct or indirectly channel their acquired knowledge to their students.

3.   There are numerous factors that influence a student's self-concept. One of these factors is their teachers are the student's role model. The Ministry of Education should therefore be more stringent when drawing up the criteria for the selection of trainee teachers. Thus only the trainee teachers who possess positive self-concept are accepted. The criteria for the level of self-concept can be determined by administering the self-concept test. Although results may not be a hundred percent accurate, it is invaluable when selecting the ideal candidate.

4.   The activities carried out in schools should be planned as such where the students' self-concept can be enhanced. The setting up of Elocution and Debating Clubs should be encouraged as these activities help to mould the students into having a more positive self-concept as well as to be more critical in their thinking. Elocution contests and debates should therefore be made an annual program at both primary and secondary level.

5.   Parents should be actively involved with the Parents and Teachers Association (PTA) to enable them to cooperate with the school to plan activities where closer relationships can be fostered among parents, teachers and students. These close relationships will indirectly influence the students' attitude and behavior towards their studies. Disciplinary problems faced by the school such as playing truant and vandalism, students who are unmotivated and low academic performances can thus be overcome if both teachers and parents join the forces.

References

Azizi Hj. Yahaya. (2000). *Hubungan Konsep Kendiri Dengan Pencapaian Matematik.* Kajian Ilmiah yang tidak Diterbikan.

Azizi Yahaya, Shahrin Hashim, Jamaludin Ramli, Yusof Boon & Abdul Rahim Hamdan. (2006). Mastering Research Method. Kuala Lumpur: PTS Professional Publishing Sdn. Bhd.

Azizi Yahaya & Jaafar Sidek Latif. (2005). *Development of Self Concept*, Pahang: PTS Publising Sdn Bhd.

Azizi Yahaya., & Kamaliah Nordin. (2006). Relationship Between Self Concepts, Motivation And Parenting Styles Effected Students Achievements. Unpublished article, UniversitiTechnology Malaysia.

Azizi Yahaya, Yusof Boon, Jamaludin Ramli, Noordin Yahaya, Raja Roslan Raja Raja Abd. Rahman. (2009). The Relationship between Dimensions of Personality, Self Concept and Family Influence on Students in the FELDA Scheme in Johore Malaysia. *European Journal of Social Science*, Vol. 11, Issue 2, ISSN: 1450-2267.

Azizi Yahaya, Jamaludin Ramli, Noordin Yahaya, &Saini Jaalam. (2009). Relationship between Self Concepts And Personality and Students' Academic Performance In Selected Secondary Schools Malaysia. *European Journal of Social Science*, Vol 11, Issue 2, ISSN: 1450-2267.

Barnes, Doughlas & Frankie Todd. (1977). *Communication and learning in small groups*. London: Henley and Boston.

Claes, M., Lacourse, E., Bouchard, C., & Perucchini, P. (2003). Parental practices in late adolescence, a comparison of three countries: Canada, France, and Italy. *Journal of Adolescence*, 26, 387-399.

Downey, Meriel. (1977). *Interpersonal judgements in education*. London: A Wheaton & Company, Exeter.

Gergen, Kenneth J. (1971). *The concept of self*. USA: Holt, Rinehart and Winston, Inc.

Jabatan Pendidikan Negeri Johor. (2000). Maklumat asas sekolah: Senarai sekolah-sekolah negeri Johor. Unit Maklumat: Sektor Pengurusan Perkhidmatan Pendidikan

Martinot, Delphine and Jean–Marc Monteil. (2000). Use of self-concept in forming preferences by French students of different level of academic achievement. *Journal of Psychology*, 140:1, 119-131.

Miller, George A. (1970). *The psychology of communication: Seven essays*. Great Britain: The Penguin Press

Pearson, Judy Cornelia & Brian H. Spitzberg. (1990). *Interpersonal, components and contexts (2ⁿᵈ edt.)*. USA: WM. C. Brown Publishers.

Sutton, Clive. (1986). *Communicating in the classroom*. Great Britain: Robert Hartnoll Ltd.

Syed Arabi Idid. (1998). Kaedah penyelidikan komunikasi dan sains sosial. Kuala Lumpur: Dewan Bahasa dan Pustaka.

Weaver II, Richard. (1996). *Understanding interpersonal communication*. USA: Harper Collins College Publishers.

Table 1. Distribution of Respondents based on Level of   general Self-concept

Level of Self-concept	Number	Percentage
High or Positive	3	0.9
Moderate	317	99.1
Low or Negative	0	0
Total	320	100

Table 2. Distribution of Respondents based on the Level of Physical Self-concept

Level of Physical Self-concept	Number	Percentage
High or Positive	53	17.0
Moderate	267	83
Low or Negative	0	0
Total	320	100

Table 3. Distribution of Respondents based on the Moral Ethics Self-concept

Level of Moral Ethics Self-concept	Frequency	Percentage
High or Positive	0	0
Moderate	305	95.0
Low or Negative	15	5.0
Total	320	100

Table 4. Distribution of Respondents based on the Level of Personal Self-concept

Level of Personal Self-concept	Frequency	Percentage
High or Positive	15	5.0
Moderate	305	95.0
Low or Negative	0	0
Total	320	100

Table 5. Distribution of Respondents based on the Level of Family Self-concept

Level of Family Self-concept	Frequency	Percentage
High or Positive	138	43.0
Moderate	179	56.0
Low or Negative	3	1.0
Total	320	100

Table 6. Distribution of Respondents based on the Level of Social Self-concept

Level of Social Self-concept	Frequency	Percentage
High or Positive	30	9.0
Moderate	280	88.0
Low or Negative	10	3.0
Total	320	100

Table 7. Distribution of Respondents based on the Level of Behavioral Self-concept

Level of Behavioral Self-concept	Frequency	Percentage
High or Positive	123	38.0
Moderate	192	60.0
Low or Negative	5	2.0
Total	320	100

Table 8. Distribution of Respondents based on the Level of Identity Self-concept

Level of Identity Self-concept	Frequency	Percentage
High or Positive	22	7.0
Moderate	269	84.0
Low or Negative	29	9.0
Total	320	100

Table 9. Distribution of Respondents based on the Level of Satisfaction of overall Self-concept

Level of Social Satisfaction Self-concept	Frequency	Percentage
High or Positive	44	14.0
Moderate	249	78.0
Low or Negative	27	8.0
Total	320	100

Table 10. Distribution of Respondents based on the Level of Interpersonal Communication Skill

Level of Interpersonal Communication Skill	Frequency	Percentage
High or Positive	46	14.4
Moderate	272	85.0
Low or Negative	2	0.6
Total	320	100

Table 11. The Relationship between Self-concept and Interpersonal Communication Skills

Relationship Between Variables	r	P	N
Self-concept with Interpersonal Communication Skills	0.239	0.000	320

$P < 0.05$

Table 12. The Relationship between Self-concept and Academic Achievement

Relationship Between Variables	r	P	N
Self-concept with Interpersonal Communication Skills	−0.56	.317	320

P<0.05

Table 13. The Relationship Between Interpersonal Communication Skills And Academic Achievement

Relationship Between Variables	r	P	N
Interpersonal Communication Skills and Academic Achievement	0.146	0.000	320

P<0.05

Table 14. The Relationship between Parents Commitment with Self-concept and Academic Achievement

Relationship Between Variables	r	P	N
Parents Level of Education with Self-concept	−0.111	0.048	320
Parents level of Education With Academic Achievement	0.260	0.000	320

P<0.05

Table 15. The Relationship between parent's Commitment with Interpersonal Communication skills and Academic Achievement

Relationship Between Variables	r	P	N
Parents parent's Commitment with Interpersonal Communication Skills	−0.139	0.013	320
parent's Commitment With Academic Achievement	0.260	0.000	320

P<0.05

Table 16. The Relationship between Parents Income with Self-concept and Academic Achievement

Relationship Between Variables	r	P	N
Parents Income and Self-concept	0.015	0.792	320
Parents income And Academic Achievement	0.242	0.000	320

P<0.05

Table 17. The Relationship between Parents Income with Interpersonal Communication Skills and Academic Achievement

Relationship Between Variables	R	P	N
Parents Income with Interpersonal Communication Skills	.146	0.000	320
Parents Education With Academic Achievement	0.242	0.000	320

Table 18. The Relationship between a Student's Position among Siblings with Self-concept and Academic Achievement

Relationship Between Variables	R	P	N
a Student's Position among Siblings with Self-concept	-.035	0.527	320
A Student's Position among Siblings with Academic Achievement	-.129	0.021	320

P<0.05

Testing Null Hypotheses Nine: There is no significant relationship between number of siblings with interpersonal communication skills and academic achievement.

Table 19. The Relationship between number of siblings with interpersonal communication skills and academic achievement

Relationship Between Variables	r	P	N
Number of siblings with Interpersonal communication skills	0.027	0.633	320
Number of siblings with Academic Achievement	-.039	0.488	320

P<0.05

The Study on Psychological Capital Development
of Intrapreneurial Team

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Abstract

Intrapreneurship is an important way for enterprises to maintain the sustained growth. Furthermore, intrapreneurial team is a dominant force to achieve intrapreneurship, among which psychological capital (PsyCap) plays an important role. Therefore, the development of psychological capital of intrapreneurial team bears an important significance. Based on the study of related literatures, this paper presents a number of recommendations on the development of intrapreneurial teams' PsyCap.

Keywords: Intrapreneurial team, Psychological capital (PsyCap), Development

1. Introduction

With the advent of global competition and the intense changes in the external environment, for businesses to survive and develop, in particular to maintain the continued growth, enterprises must maintain the entrepreneurial spirit and conduct intrapreneurship. Intrapreneurial team is a fundamental guarantee for the successful implementation of intrapreneurship. When faced with setbacks or failures, intrapreneurial teams keep optimistic in most cases. First of all, they do not admit that they are defeated, regard failures as a temporary setback, learn from them and resolve them. Failure is not a reason for retreat. Second, they think they want to be responsible for their own destiny. Through dealing with their mistakes and failures in an objective way, the intrapreneurial teams have learned how to avoid repeating the same mistakes, which in turn helps them to achieve further success.

In accordance with the viewpoints of Luthans, Youssef, and Avolio, PsyCap refers to "the positive psychological development states of individuals." Intrapreneurial teams have a high level of self-efficacy, keep optimistic in the process of enterprise development and harbor a high level of hope, show the relatively strong resilience in the process of achieving team goals, which will certainly drive the intrapreneurial team to steadily enhance learning some kind of specialized technical knowledge and skills needed by enterprises, take the initiative to master the information useful for enterprises, and self-consciously understand and acquire the essence of the technical knowledge and skills through practice, combine knowledge, information and wisdom together, so as to promote enterprise-wide human capital level and boost enterprise's technological capabilities.

This shows that PsyCap is of great significance to intrapreneurial teams, and is an important factor for intrapreneurial teams to achieve success. Consequently, the development of intrapreneurial teams' PsyCap bears a great significance.

2. Connotation of Psychological Capital

In 2004, with the ideas of positive psychology and positive organizational behavior as the framework for reflection, Luthans et al. set forth the concept of "positive psychological capital" with emphasis on positive powers of individuals as the core following the analysis of characteristics and differences of economic, human and social capital, which makes scholars start to pay attention to the study on and its impact on leaders and employees. Luthans et al. pointed out that the PsyCap refers to the individuals' positive state of mind, which mainly includes the four aspects of confidence or self-efficacy, hope, optimism and resilience. What is different from the past understanding of the PsyCap is that they

stressed the psychological capital can be measured, infinitely developed, and managed, while at the same time pointing out specific methods related to PsyCap investment, development and management.

In 2005, for the first time Luthans et al. explicitly defined psychological capital as "the core psychological elements of individuals' general positive nature, which is specifically represented as the state of mind to comply with the standards of positive organization performance. It is beyond human and social capital, and is able to make individuals obtain competitive advantages through the targeted input and development. And they pointed out that the definition can be understood from the following four aspects: First, it is based on the positive psychology paradigm (emphasizing the positivity and human advantages); Second, it is formed up of the psychological state to comply with the standards of positive organization conducts (such as uniqueness, theoretical and research base available, being effectively measured, and being represented as the state); third, it is beyond human capital (what you know, such as knowledge, skills, perspectives and capabilities) and social capital (who you know, such as trust, relationships, working networks connected with each other and friends), and it also concerns who you are (e.g. self-confidence, hope, optimism and resilience); Fourth, it improves performance and enhances the competitive advantage through its investment and development.

In 2007, Luthans, Yousseff and Avolio made a revision of the definition of psychological capital, thinking that the PsyCap refers to "an individual state of positive psychological development, which is characterized by: (1) possession of confidence (self-efficacy) by which challenging tasks can be successfully completed through showing and paying necessary efforts; (2) positive attribution should be made on the current and future success (optimism); (3) targets need to be adhered to, and if necessary the line of achieving goals can be re-selected in order to be successful (hope); (4) When confronted with the problems and difficulties, success can be achieved by sticking to goals, quickly restoring and taking roundabout ways "

Based on the above-mentioned analysis, PsyCap refers to positive psychological resources owned by an individual, and is useful in predicting a psychological state synthesis of individual high-performance work and happiness index. These positive mental states can lead to positive organizational behavior, make individuals diligently do the right thing and obtain higher performance and job satisfaction. Its components (confidence or self-efficacy, hope, optimism and resilience) are the state-like positive psychological forces, rather than tendentious, relatively stable and trait-like individual characteristics (such as due diligence or self-esteem, etc.), and psychological capital, together with human and social capital, makes up the human resources, which is owned by an individual, that can be objectively measured, invested & developed, and effectively managed.

3. Constituent Elements of PsyCap

According to the concept of psychological capital, its constituent elements must have the following characteristics: stateful, developmental, enthusiastic, discriminant validity different from other concepts, and an impact on individual performance. Thus, confidence, hope, optimism and perseverance are considered PsyCap dimensions most suitable for the aforementioned criteria (Luthans, 2004). First of all, they can be developed, and are a positive state of mind that has an impact on employee performance. Speaking of hope, Snyder (2002) believed that it was composed of the will power, objectives and ways to achieve them, and that there are convergent validity and discriminant validity between hope and other positive states, but hope also has an important influence on managers and their staff's personal performance; the study of Larson et al (2007) also shows that hope has a positive effect on staff satisfaction, organizational commitment and work happiness, and there is discriminant validity compared with other concepts. As a result, hope is in line with the requirements of PsyCap concept, so it could be a dimension of psychological capital. The relevant confidence (self-efficacy) study is the most solid. Many studies have shown that the concept of confidence, which is stateful, developmental, and enthusiastic, is an independent concept, and is closely linked with staff's job performance. Optimism is a positive experience for the future. Peterson (2000) pointed out that the real optimism, which can overcome barriers on the road to success, can be a state that can be changed. Seligman (1998) also found that optimism had a major impact on the work efficiency of insurance staff. Youseff (2006) also pointed out that optimism is highly correlated with employee satisfaction, work happiness, and work performance. Similarly, a large number of studies (Luthans, 2005; Larson 2006) have also proved that resilience can be an excellent personal potential that can be cultivated and changed, and have an important impact on the performance of employees. In addition, there is discriminant validity based on empirical analysis in the above-mentioned four factors. (Magaletta & Oliver, 1999; Youssef & Luthans, 1998). Meanwhile, there is a factor that plays a common role in the deeper level of these concepts. It closely combines them together and is probably the high-level factor——PsyCap. Hence, this paper has every reason to believe that PsyCap is made up of confidence, hope, optimism, and resilience, and that it represents the variance shared between these four variables.

In this article, self-efficacy (or confidence) refers to the confidence level of the role that individuals play of their motivation, cognitive resources and action steps, and of the ability of the specific tasks in a given scenario of successful management; hope means a positive motivational state of the sense of success resulting from the interaction based on

between agent (goal-oriented activity) and the path (plan to achieve its objectives); optimism can be defined by the two key dimension (persistence and pervasiveness) of the people's explanatory style about good and bad events to define, and refers to the positive explanatory style by which a good case is ascribed to the internal, lasting and pervasive reason, and the bad events attributed to external and temporary reason under the specific scenario; resilience is an ability to recover quickly from adversity. People with this kind of resilience are characterized by steadily accepting the reality, firmly believing the life meaning under the support of stable values, and having the capability of supernaturally coping with and adapting to big changes on a temporary basis.

4. Development of Intrapreneurial Teams' PsyCap

Intrapreneurial team is a kind of team requiring strong adaptability and stress resistance, and its goal is to support fulfilling tasks in the environment in a highly efficient way and to satisfy stakeholders. Therefore, the key to improving the efficiency of task execution is to ensure that every member of the team are aware of and support overall and individual goals, thus making a personal contribution to the team as much as possible. PsyCap is an individual positive state of mind, and it provides for team members a better psychological understanding and transformations, thereby helping them take the initiative to understand and support team goals and finally urge themselves to do their utmost to complete tasks. If team members have a positive psychological capital, then individual psychological expectations and team goals are easier to reach a consensus and form a positive psychological contract, so that their mental states can be adjusted in time even if there are deviations from the team target.

Because PsyCap is the sublimation and integration of resources and such positive psychological states as individual optimism, hope, confidence and resilience, and has great development potential, both intrapreneurial teams and individual members should consciously try to obtain, maintain and enhance it. Now, this paper proposes a few basic advices for intrapreneurial team members and teams from the following angles.

4.1 Advice on PsyCap development of team members

In 2005, Prof. Luthans proposed the famous psychological capital intervention (PCI) (For details, please refer to attached Fig. 1), and through empirical studies validated the model. As for fostering hope, cultivating the spirit of optimism, enhancing self-efficacy (confidence) and strengthening the resilience force, the model put forward a set of highly operational facilitation measures, thus offering a good way of thinking for enterprise's practice of PsyCap intervention and development.

According to Prof. Luthans' PCI model, the following suggestions are raised on PsyCap development of team members:

4.1.1 Development of hope

Hope is determined by the two major factors, namely the path and willpower. Path refers to the method, strategy or ability to achieve goals. People with high hope usually effectively find or produce a variety of ways to achieve targets. Willpower means the motive or belief to pursue goals, and is the psychological energy of achieving objectives. This energy can encourage individuals to move forward continuously, that is to say that when individuals encounter setbacks, they persist in the commitment to solve the problem through faith, thus leaving them equipped with the courage and confidence to achieve their goals. The basic principle of hope development is to strengthen the training objectives, motivation and means, and focuses on the obvious role communication. It can be specifically conducted through the following ways: First, specific, challenging and measurable team and personal goals need to be identified. It should be broken down into the stage sub-goals easy to manage and realize, which would make it easier to reach and access to stage success and the direct experience of success. Secondly, power to achieve hope is enhanced through employee involvement and empowerment. Participation and empowerment can enhance the feelings about staff grasping themselves and the team's present and future development, and when leaders are showing the confidence in employees and considering them as the talent who would be successful, the motivation and willpower expected to achieve can be substantially increased. Third, a number of alternative ways to continuously reach goals need to be figured out, and corresponding course of action worked out to boost the "readiness". Inner drill can be used to image important upcoming events, anticipate potential obstacles, make an assuming analysis of an accident, and to explore the choice of responding to plans, thereby enhancing readiness to deal with obstacles. In a volatile era, ways of choice need to be expanded to make it more open and efficient. Fourth, the willpower ought to be enhanced, and a preliminary framework for understanding of reality can be formed through clear and obvious ways. Even if obstacles arise, the staying power to overcome will be motivated and giving up will not be chosen because of temporary difficulties. Fifth, staff needs to be encouraged to enjoy pleasure gained in the process of accomplishing the goal, instead of being just concerned about the final result. Sixth, the skills in dealing with specific conditions should be equipped with. That is to say that when the original way to achieve objectives is not feasible or not effective, staff can determine to choose what time and which alternative ways to achieve the objectives. Program planning and training help in this kind of skill-building. Seventh, team members ought to know when and how to re-set the target in order to avoid sliding into a false trap of hope, when encountered with insurmountable obstacles.

4.1.2 Development of optimism

The ideal type of optimism should be realistic and flexible. Realistic optimism would not take extreme measures to justify the disliking choice and shirk personal responsibility; flexible optimism allows people to use different methods of interpretation to regard optimism as a type of adaptation to their own situation. The success and positive encouragement of other employees among the team will have a positive impact on staff and encourage them to complete the goal in a more optimistic state of mind. In the team, the methods of optimism development include: first, "be tolerant of the past." Re-planning needs to be learned and past failures and setbacks accepted. Past mistakes should be forgiven so as to be no longer subject to setbacks. Second, "the present is correctly evaluated." Be thankful to and satisfied with the success of their current lives, including those they can control and can not. Third, the "opportunities need to be sought for the future." The future and things difficult to determine can be seen as opportunities for growth and improvement, and the future should be embraced in a positive, happy, and confident attitude.

4.1.3 Development of self-efficacy

In the team, methods of self-efficacy development are mainly as follows: first, staff training intervention mode. Self-efficacy theory suggests that effective training technology is a staff training intervention mode comprised of four basic stages: (1) behavior and actions explained and demonstrated by examples; (2) learning throng discussion (LTD); (3) effective feedback approach; (4) re-training transfer. Second, feedback information and program management, which is in the process of performance evaluation, need to be perfected. Self-efficacy is an important intermediary variable affecting job performance. Studies found that positive feedback will increase the staff's self-efficacy, and negative feedback lead to a decline in self-efficacy. Third, approaches of training team members on self-regulating when faced with setbacks and occupational stress. (1) Emotion regulation. In overcoming the difficulties and actively responding to setbacks, positive emotions will maintain the original motives and expectations for future success, thus actively striving to maintain positive response. (2) Summation and reflection of the scheme. Work ought to be conducted according to plan, which determines a person's ability to effectively use time and energy and sum up lessons in order to benefit future battles. (3) The regulation of the will. Team members need to set goals, be undaunted by repeated setbacks, and believe that they can grapple with potential threats.

4.1.4 Development of resilience

Resilience allows individual and environmental protection mechanisms to improve its protection skills by increasing benefits and reducing risk factors. Three cognitive factors of resilience are: tolerance of the fact; firm convictions, and obtaining strength from the firm values; possession of the incredible capabilities to prepare for and adapt to significant changes at any time. The resilience development of team members can be implemented in three ways: First, it can be regulated through emotion. It is conducive to positive emotions of mental and physical health, can increase the power, mobilize staff potential, and enhance the ability to adapt to the environment. Second, it is regulated through language. Appropriate language can be used to eliminate employee' mental and physical displeasure, while the use of inappropriate language will increase both physical and mental frustration of the staff, leading to a serious illness. Third, it is regulated through study. Individual behavior is learned from the social environment, and abnormal psychology and behavior are a result of wrong and undesirable social pressures. Accordingly, study can also be used to eliminate stress and enhance resilience.

4.2 Proposals on PsyCap development of intrapreneurial teams

4.2.1 To create a harmonious team environment

Favorable team environment is a supportive environment of team externally and internally, and it is the fertile ground for cultivating positive PsyCap. In such circumstance, team members will take the initiative to upgrade their PsyCap, and the team will be investing heavily in the development of members' PsyCap, thus promoting the positive exertion of employees' PsyCap. This supportive team environment featuring benign interaction will play a positive role in the development of intrapreneurial teams' PsyCap.

4.2.2 To establish an effective, interactive team culture

Team culture is a deep identification with value. Encouragement of communication and information interaction is the basic operation mechanism of intrapreneurial teams. Under this mechanism, members' mind will be open, and team members take the initiative to upgrade their psychological capital. The team culture characterized by interactive learning and information-sharing is the essential culture connotation of intrapreneurial teams, as well as a culture guarantee of upgrading intrapreneurial teams' PsyCap.

4.2.3 To offer different strategies for different individual characteristics

Intrapreneurial team members have psychological diversity and dynamics, along with distinctive personal characteristics. Each person's psychological maturity and expectations of value vary from person to person. Therefore, if different strategy support and development are given to different employees with a definite goal in mind, then the

individual members will feel the warmth of the team, and their sense of happiness will increase, which is not only conducive to bring into play and realize individual value, but also better suited to the cultivation and development of individual PsyCap.

4.2.4 To cultivate PsyCap from the perspective of strategic human resource management

Viewing the human resource management of intrapreneurial teams from a strategic level, it should be noted that there is a consistency between human resource management practices and the team targets. To build intrapreneurial teams, it should be noted that intrapreneurial teams' PsyCap is developed and its values brought into play through the flexible work setting, widespread participation, stable employment, goal-oriented performance management, incentive pay policy and other strategic measures.

4.2.5 To establish and improve employee' PsyCap by encouraging employees to learn and improve their practical ability to adapt to changes in the team

Intrapreneurial teams particularly emphasize on the upgrade of staff's learning ability and adaptability, aimed to train staff on adjusting to the need for change in the team. Because intrapreneurial teams are always working in a dynamic environment and demand constant changes, therefore, prior to the changes in the team, members should be encouraged to learn how to enhance the value of PsyCap and how to increase its own occupational safety, so as to meet the new changes and challenges.

4.2.6 To offer the guarantee to PsyCap fostering and development from the system level

PsyCap intervention and development of staff require a certain degree of institutional guarantee, but PsyCap development system under the institutional guarantee is a premise for successful intervention and development of PsyCap. To build PsyCap development system from the employee - team's point of view is to combine the teams' and individual PsyCap management strategies and ensure the consistency and effectiveness of PsyCap intervention and development measures from the system angle.

References

Luthans F, Youssef C M, & Avolio B. J. (2007). *Psychological capital: Developing the human competitive edge* .Oxford, UK: Oxford University Press.

Luthans, F. (2005).*Organizational behavior.* New York: McGraw- Hill.

Seligman M E P. (2002). *Authentic happiness* .New York: Free Press.

Most likely outcome

(PsyCap)

Development content   Outcome

Design of goals and path

Overcoming obstacles,
executing plans

Hope

Fostering self-efficacy

Setting up positive
expectations

Real optimism

Job performance

Job satisfaction

Model of experiencing

success and examples

Persuasion and stimulation

Self-efficacy

Increasing resources and

avoiding risks

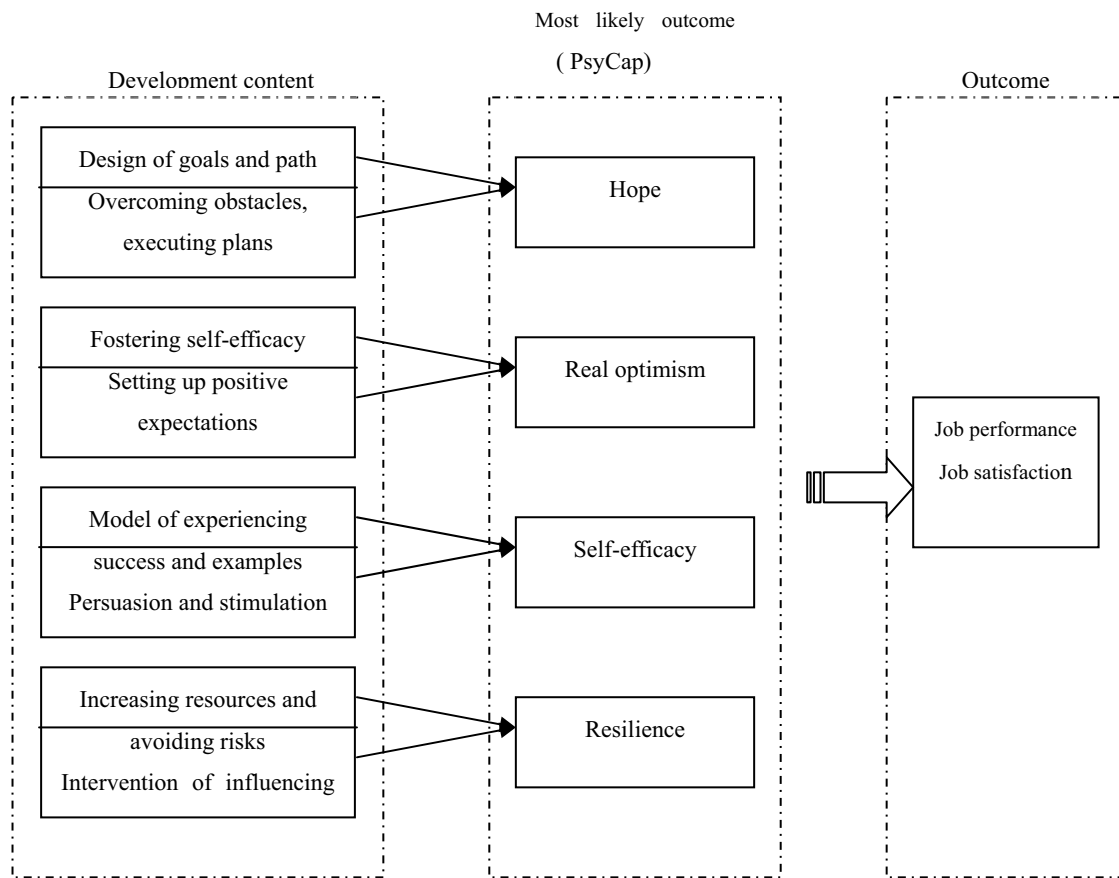Intervention of influencing

Resilience

Figure 1. Influencing effects of PCI

The Prototype Analysis of Ren: A Study

on College Students' Implicit Theories of Ren

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Abstract

This paper reports a preliminary descriptive approach to the representation of the concept of Ren. According to the prototype theory, researchers collected items (words or phrases) including features and implications of Ren from 172 college students, after which the items were simplified and combined, then 145 prototypes were obtained. After that 78 prototypes with high frequency above 7 were selected and arranged randomly to make a questionnaire, then another 300 college students were made to rate centrality of every prototypes to the meaning of Ren in Likert-typed 5 point scale. A factor analysis was made based on the rate. In terms of the result of factor analysis together with content analysis, the prototypes were classified and coded. The result shows that there are 6 facets of the representation of Ren in college students' mind:(1) righteousness and keeping faith; (2) wisdom and self-cultivation; (3) filial piety, fraternal duty, and treat others well; (4) policy of benevolence; (5) universal love and clemency; (6)political pioneers and righteous men. The result is helpful for moral education of college students from the microscopic aspect and also can be used for reference to develop China's spiritual civilization from macroscopic perspective.

Keywords: Ren, prototype, Factor analysis, Content analysis, Social cognition

1. Introduction

China is a country emphasizing ethical culture. This special culture has produced many unique and abstract sociocultural concepts. These concepts, which have been generated and evolving in long historical culture, have the cultural specificity and uniqueness, Ren (the Chinese word which equals benevolence, but its implication is richer) in Chinese traditional culture is a member of them. Ren, as the core of Confucianism, has a long history and irreplaceable position in Chinese traditional culture. Ren is an idea that impacts Chinese people very deeply.

Ren evolves throughout the development of Chinese history and culture. Ideologists and politicians all have dissertated about Ren in all ages, so it takes different spirits and features of the time. Ren originally referred to the mutual love between people. Confucius, who was the first person to make an integration of ethics, and used Ren as a philosophical category, regarded Ren as the highest moral principle, moral norm and moral realm. He considered Ren referring to the issues of coordinating the interrelation between man and man(Zhang,1988,p.146),and established the ethical thoughts structure centering on Ren, which involved Xiao(filial piety),Ti(brotherly), Zhong(loyalty), Shu(forgivable), Li(courtesy), Zhi(wisdom), Yong(brave), Gong(respectful and reverent), Kuan(lenient), Xin(faithful), Min(nimble) and Hui(favor and kindness). Xiao and Ti among them are the bases of Ren, which are also one base of benevolence thought system. Mencius propelled benevolence thought along Confucius' thoughts, developing the thoughts of benevolent politics. In Tang Dynasty, Han Yu had this expression "Universal love is Ren" in *Yuandao* as well. Zhu Xi and Wang Yangming further highlighted the value and implication of life in illumination of Ren.Tan Sitong advocated to associate benevolence thought with modern industry and commerce, international economics and trade in modern times, he believed that only if we expanded the connotation in this respect, benevolence thought can make country and its people rich to benefit the humanity, and realize the ideal of fraternal to all the living (Qin, 2008, pp.141-145). Contemporary scholars also affirm the modern implications of benevolence thought (Mou, 2001, pp.57-75; Li, 2004, pp.1-2).In a word, the heredity and expansibility make Ren has wide-ranging effects throughout all times and all aspects in China.

So far, many litterateurs and historians have discussed the connotative meaning, structure and effect of Ren, but there are few studies to explore the connotation and structure of Ren by methods of psychology. However, the research of Chinese traditional cultural concept is springing up increasingly in recent years. Chinese scholars (Li & Zuo, 2008, p.28) have researched into the social representation of Yong (the Chinese word which equals brave in English), a concept full of traditional characters, and made a self-reported questionnaire. Meng Yan and Li Zhaoxu(2008,pp.36-41) have also studied the social representation of Junzi's feature . Although the studies in this domain are still in the initial stage, it is undeniable that these studies can help us to penetrate the concepts deeply and understand the core meanings, which enables us to explore the psychological phenomenon with cultural characteristics truly from man. This paper is to explore the representation of Ren in college students in order to have a deeper understanding of this traditional ethical morality of college students. According to these understandings, the educators can improve moral education in favor of China's spiritual civilization construction.

This research is based on prototype theory advanced by Rosch (1975).The theory was put forward to aiming at the shortage of classical view. The classical view states that category membership is an all-or-none phenomenon: any instance that meets the criterion is a member; all others are none members. Because each member must possess the particular set of attributes that is the criterion for category inclusion, all members have a full and equally representative of the category (Fehr, 1988, pp. 557-579). Rosch didn't agree with this view and maintained that many natural language categories aren't defined a set of necessary and sufficient attributes, then put forward the prototype theory as an alternative to the classical view(Zhang, Li &Wang,2006, pp.1-12).Prototype theory states that concept is mainly represented as prototypes(best examples), we understand a concept mainly from the best examples illustrating the concept, e.g. when our thinking is involved in the concept "bird", we always think of pigeon instead of penguin and ostrich. This implies that pigeon and penguin can not represent concept "bird" equally (Wang &Wang, 1992, pp.267-275).From the structure of the concept, prototype theory supposes that natural concept or category has its own internal structure. The centers of every natural category are the prototypes, and the surrounding are other central members. Prototypes are the central concepts or most central members in concept family, they have the most attributes in common of the same category members and the least common attributes of different categories. Typical degree of a concept can be expressed by the resemblance to the prototype (Peng & Zhang, 2004, pp.298-305). Prototype theory assumes that many natural concepts are internally structured into a prototype, so prototype theory has provided insights into concepts central to psychology, including behavioral act (Buss & Craik,1983), personality trait(Cantor & Mischel,1979), intelligence(Neisser,1979), social situation(Cantor, Mischel & Schwartz, 1982), and environmental setting (Tversky & Hemenway,1983) (Fehr & Russell,1991,pp.425-438).

This study is based on the assumption that the concept of Ren is internally structured into prototypes for an exploratory research using this view and method. The purpose is to know the representation of Ren among today's college students and its effects on their behaviors and notions. This might be helpful for moral education of college students from the microscopic aspect and also can be used for reference to develop China's spiritual civilization from macroscopic

perspective.

2. Method

2.1 The initial stage of study

2.1.1 Participants

Participants were 172 college students from Qufu Normal University of Shandong Province in China, who were self-study or had a rest after class in classroom. Participants included 59 males, 107 females and 6 people whose gender was not reported.

2.1.2 Materials

Paper (size specification is $18.2cm *25.7cm$).

2.1.3 Procedure

Before the investigation, participants were asked to fill information of demography including gender, age, major, whether they are the only child, the main place of residence before age of 16 (city, town and rural).

At the beginning of the investigation, researchers explained to participants that this was a study on traditional Chinese culture and required them to give their opinions of Ren, then showed participants an exemplification: For the concept of Xin (the Chinese word which equals honesty and credit in English), we can give some typical examples, they are maybe (1) punctual; (2) creditable; (3) sincere; (4) legal compliance, etc. After that researchers asked the participants to write examples or types as many as they can to representatively illustrate the concept of Ren (compassion & fraternity) on a blank piece of paper, they were reminded to express briefly and concisely. Finally researchers emphasized the principle of confidentiality and requested participants to complete the task earnestly, truthfully and independently without misgivings.

2.1.4 Preliminary data processing

At first, researchers input the items and relevant information into Microsoft Excel 2003, then simplified the items of Ren, taking the key words instead of long sentences and phrases, and merging perfect synonyms to reduce the number of items, the principle was that the smaller ones were merged into the larger ones, e.g. "Be ready to help others" and "A helping hand" was incorporated, labeled "A helping hand". Thereafter the items were further merged closed to prototype, e.g. "caring", concerned", "cherish", "considerate" and "show loving care for" and so on which expressed the feeling of "caring and considerate" were incorporated into a prototype "caring and considerate". A word list of prototypes was obtained after the above processing. 78 prototypes with high frequency above 7 (cumulative frequency reaches 86.70%) were selected and arranged randomly to make a questionnaire as preparation for the second stage of the study.

2.2 The second stage of the study

2.2.1 Participants

The participants were 300 college students from Qufu Normal University who were seated in public places around the university campus, among whom there were 278 participants whose questionnaires were valid, including 95 males, 182 females and 1 people whose gender was not reported.

2.2.2 Materials

The material of second stage of the study was a questionnaire made of 78 prototypes with high frequency above 7; the items (prototypes) were arranged randomly.

2.2.3 Procedure

Before the formal rating of the prototypes, participants were asked to fill information of demography including gender, age, whether they are the only child, the main place of residence before age of 16 (city, town and rural). Then participants were asked to rate centrality of every prototypes to the meaning of Ren in Likert-typed 5 point scale. The notes of filling out questionnaire were the same to the initial stage of study.

2.2.4 Data processing

278 valid assessments on prototypes of Ren were analyzed by principal component factor analysis. 2 postgraduates of psychology classified and coded the 78 prototypes in terms of the result of factor analysis together with content analysis (Dong, 2004, pp.304-311), then merged them into the different dimensions of coding schedule. To integrating with the data in the initial stage of study, researchers obtained an Excel form including coding dimensions, items (before and after processing), prototype codes and demography information of participants. Some demography information was adjusted, additionally, to meet the need for further statistical analysis, e.g. towns were incorporated with city in the variable of main place of residence before age of 16,then this variable was divided into two parts: "city and town" and

"rural area"; the variable of major included liberal arts and science.

Finally, the data in Excel was transformed into SPSS11.5 for chi-square test, testing whether there were significant differences in frequencies of every dimensions and prototypes on four variables (gender, major, whether they are the only child, the main place of residence before age of 16).

3 Results

3.1 The result of content analysis of Ren

Participants have provided 1961 items of Ren in all, after simplifying and combining, 145 prototypes were obtained, of which there were 78 prototypes with the frequency above 7, which cumulative frequency reached 1700, accounted for 86.70%. In terms of factor analysis and content analysis, Ren can be classified into 6 categories (Table 1); the reliability in content analysis (Dong, 2004, pp.304-311) was 0.91.

3.2 Gender differences

There were 1961 items of Ren in total, 609 items from male, 1300 from female and 52 items from the ones who didn't indicate gender (not used for statistical analysis). There was no significant difference between male and female in six coding dimensions. For prototypes, the frequencies of "Personal loyalty", "Friendly", "Value the family relationship & friendship", "Amiable" and "Be forbearing & conciliatory" were significantly different between the two genders.(Table 2).

3.3 The differences between only-child and none-only-child college students

There were 1961 items of Ren in total, 419 from only-child, 1500 from none-only-child and 42 from ones who didn't specify this variable (not used for statistical analysis). The frequencies in categories of "Wisdom & self-cultivation" and "Universal love & clemency" (Table 3) were significantly different. There was no significant difference between only-child and none-only-child in prototypes.

3.4 Major differences

There were 1961 items of Ren in all, 656 from science students, 1293 from liberal arts and 12 lack of this variable (not used for statistical analysis). The frequencies in category of "Policy of benevolence" (Table 4) were significantly different between science students and liberal arts. For prototypes, the frequencies of "Moral", "Excel in virtue" and "Confucianism" (Table 5) were significantly different.

3.5 The differences between "city and town" and "rural area"

There were 1961 items of Ren in total, 804 from city and town, and 1136 from rural area and 21 from ones who didn't specify this variable (not used for statistical analysis). There were significant differences in frequencies in categories of "Wisdom & self-cultivation" and "Policy of benevolence" (Table 6). For prototypes, the frequencies of "Fraternal love", "Respecting the old & loving the young" "Protecting animals & environment", "Remember the gratitude and try to repay it", "Make a clear distinction between right and wrong", "Peaceable", "Dedicating unselfishly"(Table 7) were significantly different.

4. Discussion

4.1 Gender differences

The result showed that male college students listed more items on "Friendly", "Value the family relationship & friendship", "Be forbearing & conciliatory" than the female college students, while female college students listed more items on "Amiable" and "Personal loyalty", and the differences were significant. Besides the results that female college students listed more items on "Personal loyalty" and male college students listed more items on "Friendly", other results are easy to understand. In Chinese traditional culture, men are generally considered as characters that are tolerated and cherish family's affection and friendship; women should be tender and kind-hearted. Because of this culture, male college students have a better understanding on the connotations of Ren, which "Value the family relationship & friendship" and "Be forbearing & conciliatory "convey; female college students can comprehend implications of Ren that "Amiable" reflects. The unexpected results that male college students listed more items on "Friendly", female college students listed more items on "Personal loyalty" may be related to the rising of androgyny education in recent years.

4.2 The differences between only-child and none-only-child college students

Results showed that only-child college students listed significantly more items than none-only-child college students on dimension "Wisdom and self-cultivation", on another dimension "Universal love and clemency", the none-only-child college students listed significantly more items than the only-child college students. In only-child family, the parents have more energy and resources to educate the next generation, so they attach importance to the cultivation of their child in all aspects including intelligence development, knowledge acquisition and moral cultivation, which makes the

only-children emphasize more connotative meanings of "Wisdom and self-cultivation" in rich implications of Ren. However, the none-only children live with their brothers and sisters in growing experience, so they are tolerated and know well how to get along with others and give love to others, this can interpret why none-only-children understand better on Ren from the aspect of "Universal love and clemency" than only-children.

4.3 Major differences

Study found that there were significant differences in frequency of prototypes on "Moral", "Excel in virtue" and "Confucianism" between college students' major in liberal arts and science, specifically college students major in liberal arts listed more items on "Moral", "Excel in virtue" and "Confucianism". The result of the dimension "Policy of benevolence" was in substantial agreement. All the results can be explained that students of liberal arts pay attention to the knowledge and news in social humanity and they have the professional advantages for more knowledge collection than science students. This might be explained why they know more about implications in the realms of self-cultivation and political.

4.4 The differences in groups between "city and town" and "rural area"

Results showed that college students from city and town listed significantly more prototypes "Fraternal love", "Respecting the old and loving the young", "Remember the gratitude and try to repay it", "Making a clear distinction between right and wrong", "Peaceable" and "Dedicating unselfishly" than rural college students, while the rural college students listed more prototypes "Protecting animals and environment", and the difference was significant. The results reveal that the students from city and town are inclined to comprehend the spirit of Ren in aspect of someone ("Fraternal love", "Respecting the old and loving the young", "Remember the gratitude and try to repay it" and "Peaceable") or something ("Making a clear distinction between right and wrong" and "Dedicating unselfishly"), while the rural college students' understandings are inclined in aspect of nature "Protecting animals and environment", which can be concluded that the comprehension of Ren is largely impacted by the living environment. "City and town" college students are more in contact with the person-related or the affair-related, so the understandings of Ren mainly about someone or something, but the rural college students have more chances in touch with the nature, that's why students living in rural areas can hold the spirits of Ren in natural feelings. On the dimension "Wisdom and self-cultivation" and "Policy of benevolence", there were significant differences in frequencies between "city and town" college students and "rural area" college students: students from city and town listed more items on "Wisdom and self-cultivation", which may relate that the students from city and town are mostly only-children; while rural students listed more items on dimension "Policy of benevolence", we can understand the result in this way: the Chinese government has carried out a series of policy to support the agriculture and paid more attention to peasants' rights in these years, maybe rural students have deeper feelings in this aspect and more hopes for the implementing "Policy of benevolence", and so rural students have better understandings on "Policy of benevolence" than the students from city and town.

4.5 Enlightenment

The results of this study reflect the unique implications of Ren generating from integration between traditional culture and modern civilization as a sociocultural concept, and the impacts of Ren on contemporary college students' notions and behaviors. The research reveals that contemporary college students can understand Ren comprehensively and have a strong acceptance for the concept "Ren", it also reflects the mutations in college students' comprehension of concepts in ancient books and records during China's transition period, which provides psychological basis for the targeted jen-love education to contemporary college students. However, in analyzing the words and phrases, researchers found that college students can not master the boundary between Ren and Yi (the Chinese word which equals just and reasonable in English), which is worthy of considerations in depth. The results also show that the group of only-child lack of meaning of "love caring", "prevenance" and "lenient" in comprehending Ren, while the group of none-only-child understand less in aspect of "Wisdom and self-cultivation"; students in science have a simple understanding of Ren; "city and town" college students' comprehension in Ren lacks adequate awareness in caring about nature and the environment. In terms of the results above, researchers believe the essence of traditional culture can promote the development of moral education to college students and help them to form a perfect moral value system, which lays a foundation to carry forward socialist new prevailing custom.

This is a preliminary exploration of the social cultural concept of Ren, which provides a new perspective to further researches of Chinese traditional culture psychology, especially the research of folk psychology. The difference between concepts in ancient books and records and the representations folk concepts is an interesting research topic, which can do a favor for exploring deeper Chinese psychological phenomena. In the future, the aspects in sample representativeness and the variety of research contents are worthy of improvement in order to reveal the structure and connotation of Ren more deeply.

Acknowledgements

References

Dong, Q. (2004). *Research method of education and psychology*. Beijing: Beijing Normal University Press.pp.304-311.

Fehr, B. (1988). Prototype analysis of the concepts of love and commitment. *Journal of Personality and Social Psychology*, 55 (4), 557-579.

Fehr, B. & Russell, J. A. (1991). The concept of love viewed from a prototype perspective. *Journal of Personality and Social Psychology*, 60(3), 425-438.

Li, L. L. & Zuo, B. (2008). Yong: The important factor of Chinese traditional moral personality. In: *Abstract Book of 2008 Symposium of Chinese Psychological Society Social Psychology Professional Committee*. Chongqing, 28.

Li, Y. Z. (2004). *Hermeneutic of Benevolence Theory--Structural analysis of Confucius and Mencius' ethics*. Beijing: Renmin University of China Press.pp.1-2.

Meng, Y., Li, Z. X. & Jiang, B. (2008). Implication of Yunzi's feature. *Psychological Research*, 1(5), 36-41.

Mou, Z. J. (2001).*New exploration to the value of Confucianism*. Jinan: Qilu Press.pp.57-75.

Peng, D. L. & Zhang, B. Y. (2004). *Cognitive Psychology*. Hangzhou: Zhejiang Education Press.pp.298-305.

Qin, Y. C. (2008). *Historiette of Confucianism*. Beijing: China Society Press.pp.141-145.

Wang, S. & Wang, S. A. (1992)*. Cognitive Psychology*. Beijing: Peking University Press.pp.267-275.

Zhang, A.Q. (1988). Confucianism. In: Zhang, X P. & Wang, N Z. *Chinese culture overview*. Beijing: Oriental Press. p.146.

Zhang, W. J., Li, Z. X. & Wang, X. M. (2006). Preliminary exploration to college students' concept of honor and shame. *Social Psychological Research*, 3, 1-12.

Table 1.The result of content analysis of Ren

Coding dimension	Category	Items	Frequency
1	Righteousness & keeping faith	Brave(8); Justice(15); Devotion to duty(7); Venerable(8); Upright(11); Keep conscience clear (11); Equitable(9); Loyalty(12); Good faith(44); Responsibility(15); Hero(9); Educators & medical workers(14); Excel in virtue(26); Moral(35); Dedicating unselfishly(33); Yunzi(the Chinese word which equals nobleman or man of noble character in English)(10)	267
2	Wisdom & self-cultivation	Feel good about oneself(8); Wisdom(9); Be strict with oneself(8); Make a clear distinction between right and wrong(12); Erudite(11); Restraining in privacy(8); Active optimism(12); Stand to sense(11); Treat equally without discrimination(12); Cultivated & cultural(14); Peaceable(34); Master the principles to conduct oneself in society(10); Be forbearing & conciliatory(16); Folksy(14)	179
3	Filial piety, fraternal duty, & treat others well	Amiable(17); Kindly(23); Understand others(10); Respecting others(12); Caring & considerate(76); Respecting the old & loving the young(24); Fraternal love(25); A helping hand(24); Sincere(29) ; Filial piety(32); Friendly(28); Make allowances for (17); Do as you would be done by(10); Remember the gratitude and try to repay it(13); Friendship(8); Help(34)	382
4	Policy of benevolence	Rendao(the Chinese word which equals the way of humanity in English)(7); Be concerned about one's country & one's people(7); Benevolence Means to Love Others(13); The benevolent have no enemy (9); The Benevolent(7); Love people(8); Democracy & equity(7); Peace(13); Harmonious(12); Benevolent government(18); Confucianism(32); Helping the poor & the weak(7)	140
5	Universal love & clemency	Personal loyalty(33); Commiserate(99); Value the family relationship & friendship(18); Being honest, veracious& well-behaved(35); Generous(7); Magnanimous(127); Have a loving heart(36); Kindheartedness(35); Universal fraternity(65); Mercy(44); Renyi(the Chinese word which equals kindheartedness and justice in English)(48); Protecting animals & environment(12); Broad-minded(30); Forgive(16); A good sort(7); Goodness (75)	687
6	Political pioneers & righteous men.	Government official & revolutionary(16); Emperors ,ministers & generals(9); Love the party & the motherland(9); Lay down one's life for a just cause(11)	45
Total			1700

Table 2. χ^2 test in frequencies between male and female in prototypes

Prototype	Male		Female		χ^2
	Observed frequency	Expected frequency	Observed frequency	Expected frequency	
Personal loyalty	5	10.2	27	21.8	3.902*
Friendly	14	8.9	14	19.1	4.222*
Value the family relationship & friendship	10	5.7	8	12.3	4.636*
Amiable	1	5.4	16	11.6	5.298*
Be forbearing & conciliatory	9	5.1	7	10.9	4.366*

Note: *$p<0.05$, **$p<0.01$, ***$p<0.005$

Table 3. χ^2 test in frequencies between only-child and none-only-child in categories

Category	Only-child		Non-only-child		χ^2
	Observed frequency	Expected frequency	Observed frequency	Expected frequency	
Wisdom & self-cultivation	51	38.9	127	139.1	4.847*
Universal love & clemency	117	146.3	553	523.7	7.502**

Note: *$p<0.05$, **$p<0.01$, ***$p<0.005$

Table 4. χ^2 test in frequencies between science and liberal arts students in categories

Category	Science		Liberal arts		χ^2
	Observed frequency	Expected frequency	Observed frequency	Expected frequency	
Policy of benevolence	30	46.4	108	91.6	8.780***

Note: *$p<0.05$, **$p<0.01$, ***$p<0.005$

Table 5. χ^2 test in frequencies between science and liberal arts in prototypes

Prototype	Science		Liberal arts		χ^2
	Observed frequency	Expected frequency	Observed frequency	Expected frequency	
Moral	5	11.4	29	22.6	5.469*
Excel in virtue	4	8.8	22	17.2	3.888*
Confucianism	2	10.1	28	19.9	9.788***

Note: *$p<0.05$, **$p<0.01$, ***$p<0.005$

Table 6. χ^2 test in frequencies between "city and town" and "rural area" in categories

Category	City and town		Rural area		χ^2
	Observed frequency	Expected frequency	Observed frequency	Expected frequency	
Wisdom & self-cultivation	91	73.4	86	103.6	7.249**
Policy of benevolence	38	58.0	102	82.0	11.798***

Note: *$p<0.05$, **$p<0.01$, ***$p<0.005$

Table 7. χ^2 test in frequencies between "city and town" and "rural area" in prototypes

Prototype	City and town		Rural area		χ^2
	Observed frequency	Expected frequency	Observed frequency	Expected frequency	
Fraternal love	17	10.4	8	14.6	7.265**
Respecting the old & loving the young	15	9.9	9	14.1	4.385*
Protecting animals & environment	1	5.0	11	7.0	5.421*
Remember the gratitude and try to repay it	10	5.4	3	7.6	6.743**
Make a clear distinction between right and wrong	10	5.0	2	7.0	8.677**
Peaceable	19	13.3	13	18.7	4.240*
Dedicating unselfishly	19	13.3	13	18.7	4.240*

Note: *$p<0.05$, **$p<0.01$, ***$p<0.005$

Does Judgment Feedback Affect Visual-Field Superiority as a Function of Stimulus Structure and Content?

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Abstract

Visual-field advantage was envisaged as a function of presentation mode (unilateral, bilateral), stimulus structure (word, face), and stimulus content (emotional, neutral) in two conditions, with and without feedback of judgment. Split visual-field paradigm was taken into account with recognition accuracy and response latency as the dependent variables. Stimuli were significantly better recognized in left visual-field than in right visual-field. Unilaterally, rather than bilaterally, presented stimuli were significantly better recognized. Emotional content were intensely recognized than neutral content. Analysis using multivariate ANOVA suggested that words as well as faces were recognized better without judgment feedback condition as compared to with judgment feedback condition; however these stimuli were judged with significantly less response latency following judgment feedback.

Keywords: Stimulus structure and content, Visual-field, Presentation Mode, Judgment Feedback

1. Introduction

Different methodological variations have been carried out in split visual-field studies by changing stimulus structure. It has been found that linguistic material is responded to more efficiently and more quickly in right visual-field (RVF) or left hemisphere (LH) and facial stimuli is more distinctly and more quickly perceived in left visual-field (LVF) or right hemisphere (RH). Recent literatures show a RH or LVF advantage for perception of emotional expression and a RVF advantage for perception of neutral information. In the context of valence, RH is held responsible for negative valence and LH for positive valence. Disputes remain regarding the interactive effect of stimulus structure and stimulus content. Therefore, the question remains whether emotional content interacting with linguistic component (words) confounds RH superiority to some extent. Atchley et al. (2003) documented that the RH is preferentially sensitive to the emotional context of stimuli. Unilaterally, rather than bilaterally, presented stimuli were significantly better recognized (Basu & Mandal, 2004). Hines (1975) argued that bilateral presentation mode gives an independent assessment of the abilities of the two hemispheres whereas unilateral presentation gives a measure of information lost during inter-hemispheric transfer. Recent studies indicate the advantage in unilateral presentation might not imply attention selectivity and sudden presentation of a stimulus in unattended hemi field might automatically capture attention in an empty visual-field. Another important factor is judgment feedback (JF). Feedback of judgment refers to the knowledge of result, which has a possible effect on hemispheric dominance. Recognition of iconic memory takes place in the sensory level before it reaches the brain. Whether JF decreases the difficulty level of the processing by constantly changing the behavioral strategy of the receiver gives rise to open question. The purpose of the present experiment therefore was to examine the effect of presentation mode on the visual field advantage as elicited by stimulus structure and content with respect to feedback of judgment.

It was hypothesized that

(a) Visual field advantage will be significantly higher for stimulus structure than stimulus content.

(b) The effect will be significantly more for unilateral than bilateral presentation of stimuli.

(c)   Feedback of judgment will be significantly more beneficial than without feedback of judgment.

2. Methods

2.1 Tools

The experiment was based on a personal computer based Java program. Stimuli were shown through the monitor and responses were saved in database.

2.2 Design

The design of the experiment involving JF was a 2 (Visual-field: left visual-field, right visual-field) x 2 (Presentation mode: unilateral, bilateral) x 2 (Stimulus structure: word, face) x 2 (Stimulus content: neutral, emotional) x 2 (Judgment feedback: with JF, without JF) mixed factorial design with visual-field, presentation mode, stimulus structure, stimulus content as within subject factors and judgment feedback as between subject factor.

2.3 Sample

Participants were 320 right handed subjects (N=320), with feedback of judgment =160(male=80, female=80), without feedback of judgment =160(male=80, female=80), mean age = 21.6 yrs, SD = 2.3 yrs, mean education = 16.5 yrs) engineering students from the Indian Institute of Technology, Kharagpur, India. Since students in I.I.T come from different states, this sample was very representative of normal population. Subjects were all right-handed as measured by a 20-item Handedness questionnaire (Mandal, Pandey, Singh, & Asthana, 1992). The students did not have visual field defect, and all had the reading habit from 'left to right'. Left handed subjects were not chosen in the study, since the lateralization pattern of these subjects was found to be different from right-handed subjects (Bryden, 1982). Subjects were chosen randomly.

2.4 Procedure

From a pool of standard photographs (Mandal, 1987), 48 of them showing facial expressions (6 expressions for each of the 6 universal emotions (6x6=36): happy, sad, fear, anger, surprise, disgust, and 12 expressions of neutral state) were taken for the present study. Similarly, same number of emotion words representing six universal emotions and 12 neutral words were also selected. Preparation of neutral words was made in such a way so that no word exceeded more than 5 letters.

Stimuli were prepared unilaterally and bilaterally. 12 sequences were followed and each sequence constituted of 12 trials (total trials = 144).These stimuli were counterbalanced for structure (face, word), content (emotional, neutral) and visual-field (left, right). Six target stimuli were emotional (3 each in the RVF and LVF) and six stimuli were neutral (3 each in the RVF and LVF) from these twelve trials. It was kept in mind so that using a Boolean Array Method so that no trial appears in succession in the same sequence and these stimuli were presented in a randomized order.

Recognition accuracy was operationalized as a condition in which subjects had to respond in terms of stimulus structure as well as content and moreover they had to match the target stimulus with a set of test stimuli. Response latency was defined as the time between the onset of stimulus and presentation of response. At first, subjects were asked to fix their gaze at the center of the 17 inch computer screen; the target stimulus appeared for 180ms after an interval of 75ms. The angle through the line at the center of the window to the top left/right corner of the image with the horizontal was 55° from the intersecting point.

Subject's response was taken with the usage of arrow keys in the computer keyboard (top: emotional word, bottom: neutral word; left: emotional face, right: neutral face). 24 practice trials were administered before the beginning of actual experiment and all were asked to use the right index finger for all responses. Dependent variables were the recognition accuracy (RA) and response latency (RL). In the first step, subjects identified the stimulus category, structure x content, (for example, emotional word, emotional face, neutral word, neutral face). In the second step, a second window would emerge in the computer screen with 6 photographs or 6 words belonging to the category that subject identified only if the stimulus recognized in the first step were correct. But the RL of matching target stimuli with the test stimuli was not stored. RA of the above mentioned task was stored. Computer recorded the RL and RA in a database. A second window appears irrespective of correct response in a complete different second set. The subject had to press a numbered key (1-6) to identify the target stimulus from a pool of 6 test stimuli.

3. Results

Visual-field advantage as a function of *Stimulus Structure* (verbal, nonverbal)**, ***Stimulus Content* (emotional, neutral), the *interaction* of these factors (Stimulus Structure and Content), *Presentation mode* (unilateral and bilateral)**, **and *Judgment Feedback* were examined.

Findings were analyzed for the main effects of judgment feedback with each factor having stimulus structure, stimulus content, presentation mode and visual-field as within subject factors.

Table 1 shows the RA and RL data of participants. Analysis of the data was done with a 2 (Visual-field: left visual-field, right visual-field) x 2 (Presentation mode: unilateral, bilateral) x 2 (Stimulus structure: face, word) x 2 (Stimulus

content: emotional, neutral) x 2 (JF: with, without) mixed factorial design. The main effect of JF was treated as the between subject factor.

3.1 Main Effects of JF (RA)

The main effect of JF (RA) was significant, F= 8.34, df=1, p= .004. RA score of stimuli in 'without feedback' condition (mean=14.0) was greater than in JF (mean=13.4). The main effects of Visual-Field, Presentation Mode, Stimulus Structure and Stimulus Content were significant. Stimuli were better recognized in LVF (mean= 14.8) than in RVF (mean=12.7), F= 222.70, df=1, p< .001. Unilaterally presented stimuli were processed with greater RA (mean=16.2) in comparison to bilaterally presented stimuli (mean=11.4), F = 1365.314, df = 1, p< .001. Words were perceived with greater RA (mean=14.5) than faces (M=13.0), F = 251.53, df =1, p< .001. Emotional content was better recognized (mean=14.1) than neutral content (mean=13.4), F = 108.61, df =1, p< .001.

3.1.1 Three way interaction and two way interaction break ups of JF (RA)

The three-way interaction of Visual-Field x Presentation Mode x Judgment Feedback was significant, F = 13.38, df = 1, p < .001. The three-way interaction of Visual-Field x Presentation Mode x Judgment Feedback indicated that RA for without feedback was significantly higher than with JF in RVF during bilateral presentation. (see figure 1).

The two-way interaction of Visual-Field x Presentation Mode was significant F= 231.25, df= 1, p< .001. RA for bilateral presentation mode, suggested that the performance was significantly lower in RVF as compared to LVF.

The two-way interaction of Presentation Mode x Judgment Feedback was significant F= 20.26, df= 1, p< .001.

The two-way interaction of Presentation Mode x Judgment Feedback indicated that subjects had higher RA in without feedback in bilateral presentation mode (mean=11.9) than JF during bilateral presentation mode (mean=10.9).

The interaction of Visual-Field x Judgment Feedback was also significant, F = 13.98, df = 1, p < .001. Recognition accuracy for without feedback in LVF (mean=16.8) was higher than JF in LVF (mean=14.9) as compared to the RA of these conditions in RVF (mean of without feedback in RVF= 13.2, mean of judgment feedback in RVF= 12.2).

The three-way interaction of Presentation Mode x Stimulus Structure x Judgment Feedback showed that RA for without feedback was significantly higher than JF in face recognition during bilateral presentation, F= 34.44, df=1, p< .001 (see figure 2).

The two-way interaction of Stimulus Structure x Judgment Feedback was significant F=34.58, df = 1, p< .001. However, RA for face in without feedback (mean=13.5) was significantly higher than in JF (mean=12.6).

The two-way interaction of Presentation Mode x Judgment Feedback was significant. The result was mentioned earlier.

The three-way interaction of Stimulus Content x Presentation Mode x Judgment Feedback was significant F= 9.20, df=1, p< .003 (see figure 3). RA score in without feedback was significantly higher than JF in case of neutral content during bilateral presentation mode.

The two-way interaction of Stimulus Content x Presentation Mode was significant, F= 69.98, df= 1, p < .001. RA score was significantly lower in bilateral presentation mode for neutral content (mean=10.8) as compared to emotional content (mean= 11.9) in bilateral presentation mode.

The two-way interaction of Stimulus Content x Judgment Feedback was significant, F= 20.30, df=1, p< .001. Moreover, RA in without feedback (mean=13.8) was significantly higher than JF.

The two-way interaction of Judgment Feedback x Presentation Mode was significant, which was narrated earlier.

3.1.2 Four way interactions and two way interaction break ups of JF (RA)

The four-way interaction of Visual-Field x Stimulus Structure x Stimulus Content x Judgment Feedback was significant, F=8.17, df=1, p= .005.

The two-way interaction of Visual-Field x Stimulus Structure was also significant, F= 33.05, df=1, p< .001. Result indicated that word in LVF (mean=15.74) was more accurately recognized than face in LVF (mean=13.97).

The two-way interaction of Stimulus Structure x Stimulus Content was also significant, F= 27.96, df =1, p< .001. Result reflected that emotional word (mean=14.75) was significantly better recognized than emotional face (mean=13.56).

The two-way interaction of Stimulus Content x Judgment Feedback was discussed earlier.

The two-way interaction confirms that Visual-Field x Stimulus Content was significant F= 209.73, df=1, p< .001. Result showed that emotional content in LVF (mean=14.92) was recognized with much accuracy than that in RVF (mean=13.39). However, neutral content was also recognized with much accuracy in LVF (mean=14.79) than that in RVF (mean=12.05).

Accuracy data of four-way interaction of Visual-Field x Presentation Mode x Stimulus Structure x Stimulus Content showed was also significant, F=11.56, df=1, (p< .001).

The two way interactions of Stimulus Content x Presentation Mode, Visual-Field x Stimulus Structure, and Stimulus Structure x Stimulus Content were discussed earlier.

3.2 Main Effects of JF (RL)

The main effect of JF (RL) was significant, F=87.39, df=1, < .001. 'Without feedback' condition (mean=1490.51 msec) elicited more RL than JF (mean=1023.16 msec). The main effects of Presentation mode, Stimulus Structure were significant. Unilaterally presented stimuli (mean=1187.7 msec) were processed more quickly (taking less RL) in comparison to bilaterally presented stimuli (mean=1327.2 msec), F=63.21, df=1, p< .001. RL for words (mean= 1217.0 msec) was comparatively less than that of faces (mean=1297.9msec), F= 82.38, df= 1, p< .001.

3.2.1 Three way interaction and two way interaction break ups of JF (RL)

RL scores showed that the three-way interaction of Visual-Field x Stimulus Structure x Judgment Feedback was significant, F = 8.63, df = 1, p = .004 (see figure 4). RL of word in LVF under JF condition (976.59 msec) was less than word in LVF under without feedback condition (1443.88 msec). Similarly, RL of word in RVF under JF condition (994.17. msec) was less than word in RVF under without feedback condition (1453.30msec).

The three-way interaction of Visual-Field x Stimulus Content x Judgment Feedback was significant, F= 12.52, df=1, p< .001 (see figure 5). Relative performance in without feedback was slightly better if compared to JF for neutral contents in LVF.

The two-way interaction of Visual-Field x Stimulus Content confirmed the finding, F= 9.52, df=1, p= .002. A significant difference was noticed between neutral and emotional contents in LVF. Emotional contents in LVF (mean=1242.73 msec) took less RL than neutral contents (mean=1280.13msec) in LVF.

The three-way interaction of Stimulus Structure x Stimulus Content x Judgment Feedback showed that neutral face took maximum time (RL) in both JF   and without feedback, F= 8.42, df=1, p= .004 (see figure 6).

Since, the two-way interactive effects of Stimulus Structure x Stimulus Content, Stimulus Content x Judgment Feedback, and Judgment Feedback x Stimulus Structure was not significant, it was not taken into account.

3.2.2 Four way interactions and two way interaction break ups of JF (RL)

The four-way interaction of Visual-Field x Presentation Mode x Stimulus Structure x Judgment Feedback was highly significant, F= 21.31, df=1, p< .001.

The interaction pertaining to Visual-Field x Stimulus Structure was significant F= 13.24, df= 1, p< .001. However, face was recognized taking more RL in LVF (mean= 1312.6msec) than words in LVF (mean= 1210.2 msec) than that in RVF (mean of face in right visual-field) = 1283.2 msec, mean of word in RVF = 1223.74 msec).

The four-way interaction of Visual-Field x Stimulus Structure x Stimulus Content x Judgment Feedback showed significant interaction effect, F= 14.94, df=1, p< .001.

4. Discussion

The experiment showed that (1) the main effects of visual-field, presentation mode, stimulus structure and stimulus content are significant; (2) effects of experiment reveal that the main effect of presentation mode and stimulus structure significantly affect RL.

It is found that stimuli are significantly recognized in LVF than in RVF. The finding is in line with Gilbert and Bakan (1973) who showed that the tendency to process information is greater in LVF. Hillard (1973) also found LVF superiority by using black and white photographs. The finding is also supported by Coronel et al. (1999) who found LVF superiority in perception of stimuli in majority of right-handed subjects expressed as a smaller response time. Schweinberger et al. (2003) also found a RH superiority in case of unfamiliar faces. The superiority was measured in terms of LVF and both visual-field advantage in accurately recognising the expressions of unfamiliar faces.

Results corroborated that words are recognized with greater recognition accuracy than face. Words are recognized with significant greater accuracy than face, suggesting that lexical decision task in the study is cognitively less demanding as compared to faces (Basu & Mandal, 2004).

Moreover, emotional contents are more accurately recognized than neutral content. Nague and Moscovitch (2002) substantiated the finding. They found that explicit memory is more dependent on the RH, in case of emotional words. However, perception of emotional and non-emotional words is more dependent on the LH. This finding is in line with Compton et al. (2005) that emotional stimuli gets special priority in information processing. He found that across the field advantage is better in angry and happy faces as compared to neutral faces. The result was reflected both in RA and RL measure.

The result is consistent with earlier findings (Banich & Belger, 1990; Heinze et al., 1990; Luck et al., 1990). Banich and Belger (1990) showed a unilateral advantage in a physical matching task in comparison to bilateral presentation. The

present finding confirms the proposition by Hines (1975) in which unilateral, in comparison to bilateral, presentation of stimuli is found to enhance the RA.

The finding supports the behavioral data that subjects respond faster to unilateral stimuli to bilateral stimuli (Lange et al., 1999). They showed that event related potentials (ERP) effects of visual spatial attention are noticed in unilateral presentation. On the other hand, an attention related posterior contra lateral positivity was not observed. The result can be interpreted also on the basis of random sequence of single stimuli might automatically draw attention. (Luck et al., 1990). Their task was to search a target letter from distracters. According to them, reorienting attention after each irrelevant stimulus during bilateral presentation inhibits the selection of attention.

The hypothesis that JF would elicit greater RA and lower RL in eliciting visual-field advantage as compared to that without judgment feedback was partially supported. RA scores in without feedback cases were much higher than those with JF thus contradicting the hypothesis. However, RL in without feedback cases was significantly higher than those with JF, thus corroborating the hypothesis. Thus, error rates increased in JF along with quick perception.

That JF does not enhance RA can be explained by the fact that the bias is systematically embedded in the visual system and JF failed to alter this systematic bias. JF would probably play a role in changing behavioral strategy if it was due to error. The rationale behind forming the hypothesis was that recognition of iconic memory takes place in the sensory level before reaching the brain and thus probably would have changed the behavioral strategy. But the systematic bias already embedded in the visual system did not allow the efficacy of judgment to change.

JF change behavioral strategy in the sensory memory level and face recognition involves analytical components. Thus face recognition required processing information at a deeper level and detailed task analysis and is better recognized in without feedback.

One interesting finding is that error rates increase in JF along with quick perception giving rise to an open debate. JF may be looked upon as example based learning where counter examples are being presented.

5. Conclusion

RA scores in without feedback was much higher than JF. Interestingly, RL in without feedback was significantly higher than JF. This showed that although stimuli were better and accurately perceived in without feedback, RL was high. On the other side, stimuli were less accurately perceived in JF, but it took less RL. So, error rates increased in JF along with quick perception.

Results showed that JF elicits greater accuracy in cases of (a)words, with a more pronounced effect in unilateral presentation mode; (b) emotional content in unilateral presentation mode. JF elicited less RL in case of emotional words.

The present study could not explain why without feedback cases elicit better recognition accuracy than JF. A new experimental set-involving example based learning and counter examples can be undertaken as a future work.

6. Implications of this study for future research

However, these issues may be taken into consideration in future and a more sophisticated tool of split visual field task can be developed to give due importance to both stimulus structure and content along with valence of stimuli. Besides, other central measures such as dichotic listening measures can also be taken into account to assess the relationship of hemispheric dominance with respect to judgment feedback.

References

Atchley, R. A., Iliardi, S. S., & Enloe, A. (2003). Hemispheric asymmetry in the processing of emotional content in word meanings: The effect of current and past depression. *Brain and Language*, 84, 105-119.

Banich, M. T., & Belger, A. (1990). Interhemispheric processing: How do the hemispheres divide and conquer a task? *Cortex*, 26, *77-94.*

Basu, A., & Mandal, M. K. (2004). Brief Communication: visual-field superiority as a function of stimulus type and content: further evidence. *International Journal of neuroscience,* 114, 833-839.

Bryden, M.P. (1982). *Laterality*: *Functional asymmetry in the intact brain*. New York: Academic Press.

Compton, R. J., Feigenson, K. & Widick, P. (2005). Take it to the bridge: An interhemispheric processing advantage for emotional faces. *Cognitive Brain Research,* 24, 66-72.

Coronel, M., DeAbreu, D., & Eblen-Zajjur, A. (1999). Reaction time to dichotic visual stimulation and its relationship to cerebral hemispheric specialization. *Acta Cient Venez*, 50, 29-33.

Gilbert, C., & Bakan, P. (1973). Visual asymmetry in perception of faces. *Neuropsychologia,* 11,355-362.

Heinze, H. J., Luck, S. J., Mangun, G.R., & Hillyard, S.A. (1990). Visual event related potentials index focused attention within bilateral stimulus arrays. I. Evidence for early selection. *Electroencephalography and Clinical Neurophysiology,* 75, 511-527.

Hillard, R.D. (1973). Hemispheric laterality effects on a facial recognition task in normal subjects. *Cortex,* 9, 246-258.

Hines, D. (1975). Independent functioning of the two cerebral hemispheres for recognizing bilaterally presented tachistoschopic visual half field stimuli. *Cortex*, 11, 132-143.

Lange, J. J., Wijers, A. A., Mulder, L. J. M., & Mulder, G. (1999). ERP effects of spatial attention and display search with unilateral and bilateral stimulus displays. *Biological Psychology,* 50, 203-233.

Luck, S. J., Heinze, H. J., & Mangun, G. R., & Hillyard, S. A. (1990). Visual event related potentials index focused attention within bilateral stimulus arrays II. Functional dissociation of P1 and N1 components. *Electroencephalography and Clinical Neurophysiology,* 75, 528-542.

Mandal, M. K. (1987). Decoding of facial emotion, in terms of expressiveness by schizophrenics and depressives. *Psychiatry*, 50, 371-376.

Mandal, M. K., Pandey, G., Singh, S. K., & Asthana, H._S. (1992). Degree of asymmetry in lateral preferences: eye, foot, ear. *Journal of Psychology,* 126, 155-162.

Nague, S., & Moscovitch, M. (2002). Cerebral hemispheric differences in memory of emotional and non emotional words in normal individuals. *Neuropsychologia,* 40, 1601-1607.

Schweinberger, S. R., Baird, L. M., Blumler, M., Kaufmann, J. M, & Mohr, B. (2003). Interhemispheric cooperation for face recognition, but not for affective facial expressions. *Neuropsychologia*, 41, 407- 414.

Table 1. Recognition Accuracy and Response Latency Mean and Standard Deviation for Visual-Field, Stimulus Structure, Stimulus Content, Presentation Mode

Visual-Field			Left Visual-Field							
Stimulus Structure			Word				Face			
Judgment Feedback	Presentation Mode	Stimulus Content	Mean Acc	Mean RL (msec)	SD Acc	SD RL(msec)	Mean Acc	Mean RL(msec)	SD Acc	SD RL(msec)
Judgment Feedback	Unilateral	Neutral	16.92	975.32	1.50	267.66	15.24	1076.65	1.80	349.89
		Emotional	16.90	932.17	1.44	251.27	15.66	1027.26	1.87	300.03
	Bilateral	Neutral	14.85	1022.17	3.60	290.07	11.78	1188.88	4.14	271.69
		Emotional	15.48	976.72	3.05	288.77	12.44	1070.64	3.03	290.92
Without Judgment Feedback	Unilateral	Neutral	16.86	1287.19	1.55	452.39	15.43	1441.20	2.10	517.52
		Emotional	16.73	1314.50	1.30	513.65	15.13	1424.99	1.88	560.01
	Bilateral	Neutral	13.80	1596.74	3.84	830.29	13.41	1652.91	2.68	676.77
		Emotional	14.36	1577.07	3.23	790.33	12.69	1618.47	2.56	745.31
Visual Field			Right Visual-Field							
Stimulus Structure			Word				Face			
Judgment Feedback	Presentation Mode	Stimulus Content	Mean Acc	Mean RL (msec)	SD Acc	SD RL(msec)	Mean Acc	Mean RL (msec)	SD Acc	SD RL(msec)
Judgment Feedback	Unilateral	Neutral	16.98	986.11	1.46	287.05	14.81	1062.40	2.09	325.70
		Emotional	17.19	939.09	1.13	253.96	16.25	1009.85	1.67	291.59
	Bilateral	Neutral	8.33	1024.78	4.46	322.05	5.45	942.22	5.22	614.43
		Emotional	10.07	1026.73	4.25	308.88	6.97	1109.58	4.16	360.77
Without Judgment Feedback	Unilateral	Neutral	16.85	1343.56	1.51	540.85	14.9	1440.40	2.36	528.35
		Emotional	16.79	1352.20	1.42	563.16	16.05	1369.75	1.66	495.55
	Bilateral	Neutral	9.87	1533.65	5.41	811.83	9.20	1672.42	4.86	850.47
		Emotional	10.49	1583.8	5.16	798.63	11.46	1639.33s	4.15	717.45

*Maximum possible score per cell: 18 (for Accuracy) *Response latency is for correct response only

Table 2. Summary ANOVA with Judgment Feedback Accuracy as Dependent Measure

Tests of Between-Subjects Effects (Judgment Feedback Accuracy)					
Source	Sum of Squares	df	Mean Square	F	Sig
JUDGMENT FEEDBACK	235.470	1	235.470	8.34	.004
Error	8969.605	318	28.206		
Tests of Within-Subjects Effects					
VISUAL-FIELD	5839.653	1	5839.653	222.70	.001
VISUAL-FIELD x JUDGMENT FEEDBACK	366.582	1	366.582	13.980	.001
Error (VISUAL-FIELD)	8338.390	318	26.221		
PRESENTATION MODE	28984.595	1	28984.595	1365.31	.001
PRESENTATION MODE x JUDGMENT FEEDBACK	430.128	1	430.128	20.26	.001
Error (PRESENTATION MODE)	6750.902	318	21.229		
STRUCTURE	2808.450	1	2808.450	251.53	.001
STRUCTURE x JUDGMENT FEEDBACK	386.101	1	386.101	34.58	.001
Error (STRUCTURE)	3550.574	318	11.165		
CONTENT	699.153	1	699.153	108.61	.001
CONTENT x JUDGMENT FEEDBACK	130.688	1	130.688	20.302	.001
Error (CONTENT)	2047.034	318	6.437		
VISUAL-FIELD x PRESENTATION MODE	6502.520	1	6502.520	231.25	.001
VISUAL-FIELD x PRESENTATION MODE x JUDGMENT FEEDBACK	376.278	1	376.278	13.38	.001
	376.278	1.000	376.278	13.38	.001
Error (VISUAL-FIELD x PRESENTATION MODE)	8941.827	318	28.119		
VISUAL-FIELD x STRUCTURE	102.378	1	102.378	33.05	.001
VISUAL-FIELD x STRUCTURE x JUDGMENT FEEDBACK	3.938	1	3.938	1.27	.260

Source	Sum of Squares	df	Mean Square	F	Sig
Error (VISUAL-FIELD x STRUCTURE)	984.809	318	3.097		
PRESENTATION MODE x STRUCTURE	.282	1	.282	.02	.864
PRESENTATION MODE x STRUCTURE x JUDGMENT FEEDBACK	332.112	1	332.112	34.44	.001
Error (PRESENTATION MODE x STRUCTURE)	3066.230	318	9.642		
VISUAL-FIELD x PRESENTATION MODE x STRUCTURE	89.782	1	89.782	32.39	.001
VISUAL-FIELD x PRESENTATION MODE x STRUCTURE x JUDGMENT FEEDBACK	.113	1	.113	.04	.840
Error (VISUAL-FIELD x PRESENTATION MODE x STRUCTURE)	881.230	318	2.771		
Error (VISUAL-FIELD x CONTENT)	705.949	318	2.220		
PRESENTATION MODE x CONTENT	205.601	1	205.601	69.98	.001
PRESENTATION MODE x CONTENT x JUDGMENT FEEDBACK	27.028	1	27.028	9.20	.003
Error (PRESENTATION MODE x CONTENT)	934.246	318	2.938		
VISUAL-FIELD x PRESENTATION MODE x CONTENT	85.595	1	85.595	31.46	.001
VISUAL-FIELD x PRESENTATION MODE x CONTENT x JUDGMENT FEEDBACK	5.778	1	5.778	2.12	.146
Error (VISUAL-FIELD x PRESENTATION MODE x CONTENT)	865.002	318	2.720		
STRUCTURE x CONTENT	112.813	1	112.813	27.96	.001
STRUCTURE x CONTENT x JUDGMENT FEEDBACK	20.251	1	20.251	5.02	.026
Error (STRUCTURE x CONTENT)	1282.812	318	4.034		
VISUAL-FIELD x STRUCTURE x CONTENT	222.778	1	222.778	102.25	.001

Source	Sum of Squares	df	Mean Square	F	Sig
VISUAL-FIELD x STRUCTURE x CONTENT x JUDGMENT FEEDBACK	17.813	1	17.813	8.17	.005
Error (VISUAL-FIELD x STRUCTURE x CONTENT)	692.784	318	2.179		
PRESENTATION MODE x STRUCTURE x CONTENT	2.195	1	2.195	.68	.410
PRESENTATION MODE x STRUCTURE x CONTENT x JUDGMENT FEEDBACK	2.278	1	2.278	.70	.401
Error (PRESENTATION MODE x STRUCTURE x CONTENT)	1023.402	318	3.218		
VISUAL-FIELD x PRESENTATION MODE x STRUCTURE x CONTENT	27.907	1	27.907	11.56	.001
VISUAL-FIELD x PRESENTATION x STRUCTURE x CONTENT x JUDGMENT FEEDBACK	2.278	1	2.278	.94	.332
Error (VISUAL-FIELD x PRESENTATION MODE x STRUCTURE x CONTENT)	767.690	318	2.414		

Table 3. Summary ANOVA with Judgment Feedback Response Latency as Dependent Measure

Tests of Between-Subjects Design (Judgment Feedback Response Latency)					
Source	Sum of Squares	df	Mean Square	F	Sig
JUDGMENT FEEDBACK	281100957.3	1	281100957.25	87.39	.000
Error	1022798733	318	3216348.218		
Tests of Within-Subjects Design					
VISUAL-FIELD	80232.778	1	80232.778	1.62	.204
VISUAL-FIELD x JUDGMENT FEEDBACK	223608.378	1	223608.378	4.52	.034
Error (VISUAL-FIELD)	15718979.219	318	49430.752		
PRESENTATION MODE	24933957.188	1	24933957.188	63.21	.001
PRESENTATION MODE x JUDGMENTFEEDBACK	11664181.032	1.000	11664181.032	29.57	.000
Error (PRESENTATION MODE)	125429623.155	318	394432.777		
STRUCTURE	8391763.188	1	8391763.188	82.38	.001
STRUCTURE x JUDGEMENT FEEDBACK	37595.288	1	37595.288	.36	.544
Error (STRUCTURE)	32391506.898	318	101860.085		
CONTENT	434608.903	1	434608.903	5.72	.017
CONTENT x JUDGMENT FEEDBACK	30537.113	1	30537.113	.40	.526
Error (CONTENT)	24135800.859	318	75898.745		
VISUAL-FIELD x PRESENTATION MODE	232309.013	1	232309.013	4.43	.036
VISUAL X PRESENTA XJUDGMENT FEEDBACK	22277.812	1	22277.812	.42	.515
Error (VISUALX PRESENTATION MODE)	16675593.050	318	52438.972		
VISUAL-FIELD X STRUCTUR	587216.450	1	587216.450	13.24	.001
VISUAL-FIELD x STRUCTURE x JUDGEMENT FEEDBACK	382814.450	1	382814.450	8.63	.004

Source	Sum of Squares	df	Mean Square	F	Sig
Error (VISUAL-FIELD x STRUCTURE)	14098435.975	318	44334.704		
PRESENTATION MODE x STRUCTURE	180428.757	1	180428.757	3.31	.070
PRESENTATION MODE x STRUCTURE x JUDGMENT FEEDBACK	3090.720	1	3090.720	.05	.812
Error (PRESENTATION MODE x STRUCTURE)	17311431.898	318	54438.465		
VISUAL-FIELD x PRESENTATION MODE x STRUCTURE	1193.512	1	1193.512	.02	.871
VISUAL-FIELD x PRESENTATION MODE x STRUCTURE x JUDGMENT FEEDBACK	956812.512	1	956812.512	21.31	.001
Error (VISUAL-FIELD x PRESENTATION x STRUCTURE)	14276640.350	318	44895.095		
VISUAL-FIELD x CONTENT	460978.657	1	460978.657	9.52	.002
VISUAL-FIELD x CONTENT x JUDGEMENT FEEDBACK	606520.913	1	606520.913	12.52	.001
Error (VISUAL-FIELD x CONTENT)	15396339.305	318	48416.161		
PRESENTATION MODE x CONTENT	269062.003	1	269062.003	5.64	.018
PRESENTATION MODE x CONTENT x JUDGEMENT FEEDBACK	133661.250	1	133661.250	2.80	.095
Error (PRESENTATION MODE x CONTENT)	15149822.622	318	47640.952		
VISUAL-FIELD x PRESENTATION MODE x CONTENT	1273673.538	1	1273673.538	24.04	.001
VISUAL-FIELD x PRESENTATION MODE x CONTENT X JUDGMENT FEEDBACK	153760.032	1	153760.032	2.90	.089
Error (VISUAL-FIELD x PRESENTATION MODE x CONTENT)	16841652.805	318	52961.172		
STRUCTURE x CONTENT	128560.612	1	128560.612	2.08	.149
STRUCTURE x CONTENT x JUDGMENT FEEDBACK	518500.503	1	518500.503	8.42	.004

Source	Sum of Squares	df	Mean Square	F	Sig
Error (STRUCTURE x CONTENT)	19577199.759	318	61563.521		
VISUAL-FIELD x STRUCTURE x CONTENT	65308.163	1	65308.163	1.47	.225
VISUAL-FIELD x STRUCTURE x CONTENT x JUDGEMENT FEEDBACK	660797.570	1	660797.570	14.94	.001
Error (VISUAL-FIELD x STRUCTURE x CONTENT)	14056338.642	318	44202.323		
PRESENTATION MODE x STRUCTURE x CONTENT	111863.403	1	111863.403	2.17	.141
PRESENTATION MODE x STRUCTURE x CONTENT x JUDGMENT FEEDBACK	17523.200	1	17523.200	.34	.560
Error (PRESENTA*STRUCTUR*CONTENT)	16329046.272	318	51349.202		
VISUAL-FIELD x PRESENTATION MODE x STRUCTURE x CONTENT	253547.051	1	253547.051	6.01	.015
VISUAL-FIELD x PRESENTATION MODE x STRUCTURE x CONTENT X JUDGMENT FEEDBACK	312093.882	1	312093.882	7.40	.007
Error (VISUAL-FIELD x PRESENTATION MODE x STRUCTURE x CONTENT)	13410471.942	318	42171.295		

Three-Way Interaction of Visual-Field x Presentation Mode x Judgment Feedback

Figure 1.

Three-Way Interaction of Presentation Mode x Stimulus Structure x Judgment Feedback

Figure 2.

Three-Way Interaction of Stimulus Content x Presentation Mode x Judgment Feedback

Figure 3.

Three-Way Interaction of Visual-Field x Stimulus Structure x Judgment Feedback
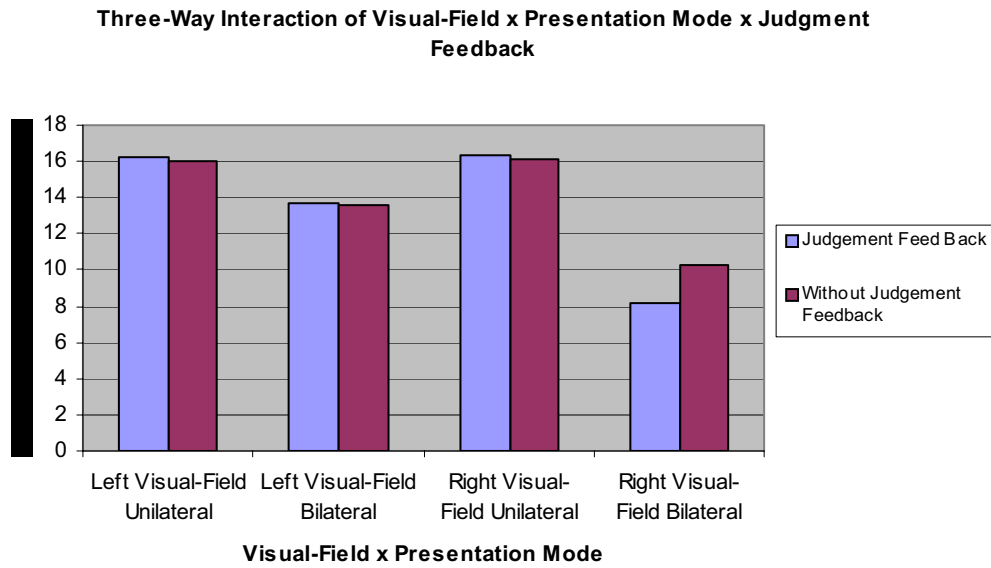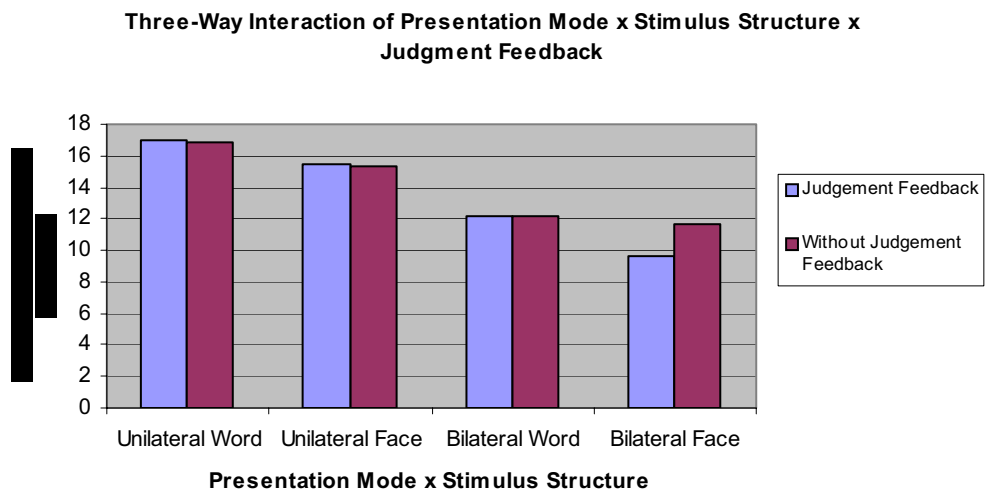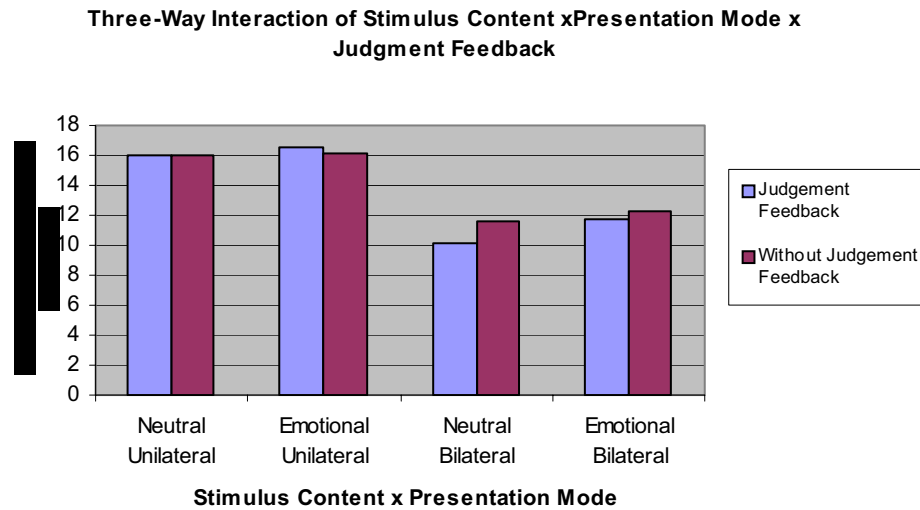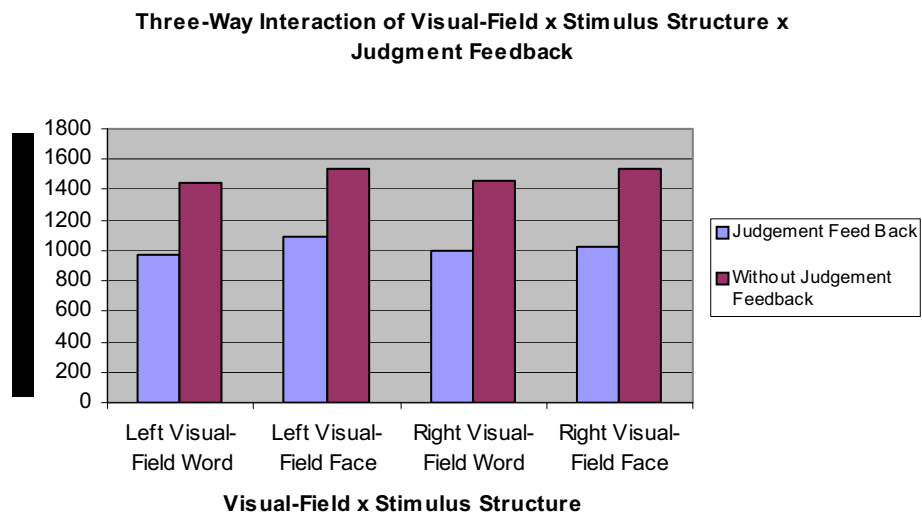
Figure 4.

Three-Way Interaction of Visual-Field x Stimulus Content x Judgment Feedback
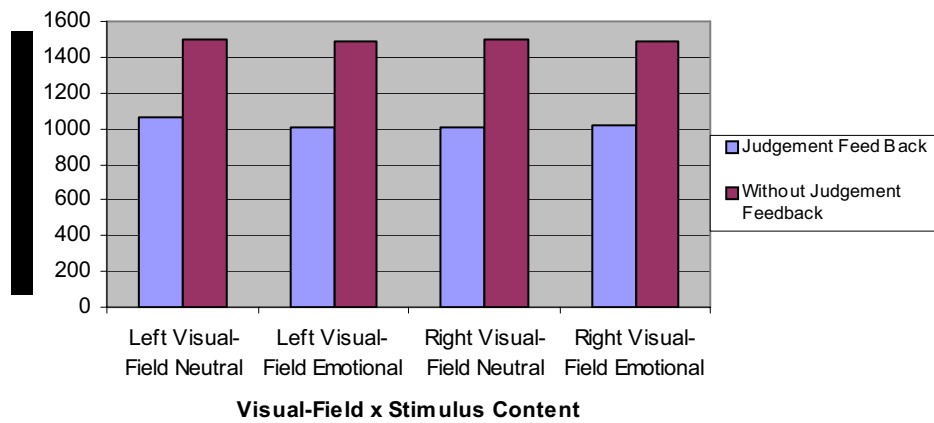
Figure 5.

Three-Way Interaction of Stimulus Content x Stimulus Structure x Judgment Feedback
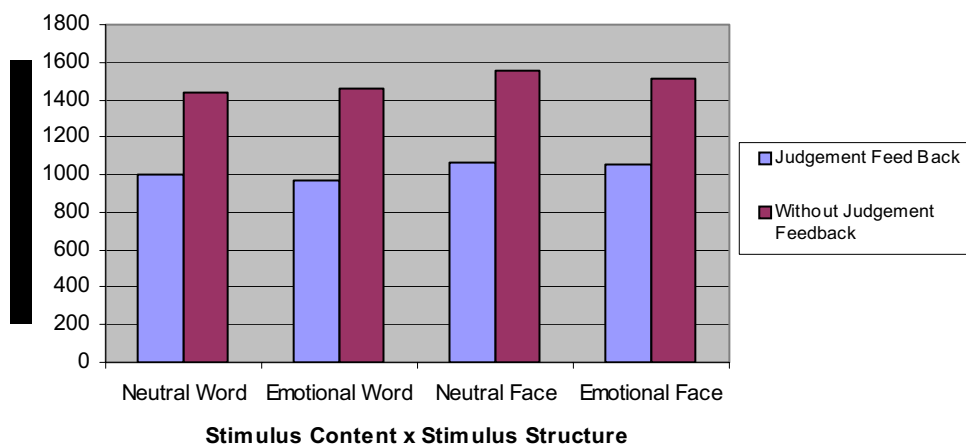
Figure 6.

A Study on the Job Engagement of Company Employees

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Abstract

Purpose The present paper, based on relative studies done both at home and abroad, intends to investigate the relationships between individual characteristics of the employees in the company and their job engagement. **Methodology** by using the UWES (Utreeht Work Engagement Scale) **Result** The relevance between company employees' individual characteristics and the variables of job engagement is significant. The regression analysis further finds out that the regression is significant between company employees' individual characteristics and the dimensions (vigor, dedication, and absorption) of job engagement. In addition, gender and length of working can predict the degree of employees' engagement into working. **Conclusion** employees' individual characteristics studied in the present paper have an effect on their job engagement.

Keywords: Job engagement, Vigor, Dedication, Absorption

With the development of Positive Psychology and Positive Organizational Behavior, the long-ignored human virtues, such as the strength and positivity of the members in an organization, and positive mental abilities are attracting more and more attention. Within this context, job engagement, as the opposite of job disengagement, becomes the new research focus of scholars.

Kahn (1990) puts forward the concept of "personal engagement" for the first time. And he defines personal engagement as the harnessing of organization members' selves to their work roles (Kahn, 1990: 694). From the point of view of Kahn, self and work role exist in some dynamic and negotiable relation: when engaged deeper in his or her job, a person both drives personal energies into role behaviors (self-employment) and displays the self within the role (self-expression); in the opposite condition, the individual uncouples self from role, avoids creating job achievement, and displays an evacuation from role obligations. Scholars, such as Schaufeli, extend Kahn's concept of job engagement in another way. They define job engagement as a full state with persistent and positive moods and motivations, with vigor, dedication, and absorption as its major features.

Based on studies done both at home and aboard, the present author attempts to investigate the effect of employees' individual characteristics on their job engagement.

1. Subjects and Methods

1.1 Subjects

The current study selected 300 employees randomly from three companies to fill in the questionnaires. 248 questionnaires were recovered, reaching a response rate of 83%. Among the three companies one is located in the urban area, and the other two are from the countryside. Of all the employees,182 were male ones, occupying 52%; and 118 female employees, with a percentage of 48%.

1.2 Instruments

The measurement of job engagement was conducted with the UWES (Utreeht work engagement scale), which was designed by Schaufeli. The scale involves three factors: vigor, dedication, and absorption. Zhang Yiwen, a scholar in China, has proved that the UWES deserves a high degree of reliability and validity .

1.3 Data analysis

SPSS 11.5 was used for analyzing the data in the present study.

2. Results

2.1 The differences in job engagement between the employees in company with different characteristics

First of all, a comparison was done to reveal the differences in job engagement between employees with different characteristics. The compound analysis (2×2×6) was used for analyzing the three factors: gender, marital status, and length of working (see Table 1).

Insert Table 1 here

Table 1 shows that the difference between male and female employees in their job engagement is manifested mainly on the dimension of dedication. The interaction between gender and marital status has a significant difference in the dimensions of vigor and dedication of job engagement.

2.2 The differences in job engagement between male and female company employees

A further investigation of the scores gained by male and female employees in their job engagement shows that male employees have higher scores over female ones on the dimension of vigor and absorption while female employees gain more scores than male ones on the dimension of dedication.

Insert Table 2 here

2.3 The differences in job engagement between company employees with different marital status

From the above analysis, it can be seen that the interaction between company employees' gender and their marital status has a significant difference in the dimensions of vigor and dedication of job engagement. A further analysis of the scores gained by company employees in their job engagement on the three dimensions shows: unmarried employees have higher scores than those married ones on all the three dimensions of job engagement, esp. on the dimensions of vigor and dedication.

Insert Table 3 here

2.4 The differences in job engagement between company employees with different length of working

A further analysis of the scores gained by the employees in the company of different length of working shows that company employees with 0~5 years of working gain the highest scores on all the three dimensions. However, there is a fall in the job engagement of employees who have a length of 6~10 years of working experience. And there is a rise in job engagement of employees with 11~15 years of working. Employees who have 16~20 years of working experience gain the lowest scores on the dimensions of dedication and absorption.

Insert Table 4 here

3. Discussions

The results of the present study show that there exist differences in job engagement between male and female employees in the company, esp. on the dimension of dedication. Female employees value more their jobs than male ones. Male employees gain higher scores on the dimensions of vigor and absorption than female ones, which can be partly explained by the fact that men are generally more vigorous than women.

Unmarried employees gain higher scores than married employees on all the three dimensions, which may be explained by the fact that unmarried employees have more time and energy to spend on job. Generally speaking, due to having a short time in working, male employees feel refreshed when they work, and this will strengthen their engagement in working.

Employees with a length of working for 0~5 years gain higher scores than those in other groups in job engagement on all the three dimensions. Usually, the employees who have just begun working have a fresh feeling towards their job, and are full of energy. There appears a fall in job engagement of employees with a length of working for 6~10 years. The two possible reasons: one is that they feel a bit tired after a period of high-engagement into working; another reason is that employees in this group have established their own families, which makes them distribute part of their energy into their families. Thus, it is understandable that there appears a fall in their job engagement. Then, a rise appears in job engagement of the employees. On the whole, after 6 years of working, there will appear a fall-rise curve in the job engagement of company employees.

4. Conclusions and Implications

Through the analysis of the job engagement of 248 employees from the three fatories, the present study draws the following conclusions:

(1) Female employees dedicate significantly more than male employees in their job engagement. Create reasonable

atmosphere and conditions for employees, make them involved in job and experience success and happiness, thus to make them more devoted into working.

(2) The strength of unmarried employees' full of energy and deep engagement into working should be made good use of. Efforts should be made to create a harmonious human relationships and a good cultural atmosphere in factory. In addition, the job engagement of married employees should be strengthened.

(3) High pertinence should be strengthened according to the different length of working of the employees. The construction of company culture should be favorable for relieving the tiredness and pressure of working for the employees, so as to make them more dedicated into working.

References

Kahn WA. (1990). Psychological Conditions of Personal Engagement and Disengagement at Work. *Academy of Management Journal*, 33(4): 692-724.

Li Jinbo, Xu Baihua, & Chen, Jianming. (2006). The Effect of Organizational Factors on Job Engagement. *Chinese Journal of Applied Psychology*, 12(2): 176-181.

Li, Rui & Ling, Wen. (2007). A Review of the Research on Work/Job Engagement. *Advances in Psychological Science*, 15 (2): 366-372.

Saleh, S. D. & Hosek, J. (1976). Job involvement: Concept and measurement. *Academy of Management Journal*, 19(2): 213-224.

Schaufeli W. B., Salanova M, Gonza RV, et al. (2002). The Measurement of Engagement and Burn out: A Confirmative Analytic Approach. *Journal of Happiness Studies*, 3(1): 71-92.

Sheng, Jiansen. (2006). Teachers, Job Involvement: Its Structure and Influencing Factors. *Psychological Development and Education*, (2): 108-112.

Zhang, Yiwen & Gan Yiqun. (2005). The Chinese Version of Utrecht Work Engagement Scale: An Examination of Reliability and Validity. *Chinese Journal of Clinical Psychology*, 13(3): 268-271.

Table 1. The compound analysis of the job engagement of company employees with different gender, marital status and length of working

Source of variance	vigor	dedication	absorption
gender	1.249	4.138*	1.214
marital status	0.297	0.028	0.005
length of working	0.306	0.559	1.225
gender × marital status	4.097*	5.301*	2.690
gender × marital status	1.373	2.087	2.152
marital status × length of working	0.432	0.620	1.099
gender×marital status×length of working	0.789	0.379	0.013

Notes: "×" stands for the interaction; * $p < 0.05$

Table 2. A comparison of job engagement between male and female employees

	Male employees M (SD)	Female employees M (SD)
vigor	29.17(6.72)	27.89 (6.91)
dedication	24.92(6.79)	25.32 (6.19)
absorption	25.28(5.70)	25.09 (5.53)

Table 3. A comparison of job engagement between employees of different marital status

	Unmarried employees M (SD)	Married employees M (SD)
vigor	29.53(7.32)	28.40(6.77)
dedication	25.69(6.48)	24.93(6.61)
absorption	25.33(5.17)	25.18(5.73)

Table 4. A comparison of job engagement between employees of different length of working

	vigor M (SD)	dedication M (SD)	absorption M (SD)
0—5 years (group1)	30.00(6.22)	26.58(5.89)	26.02(5.25)
6—10 years (group2)	27.84(7.50)	24.48(7.17)	25.03(5.92)
11—15 years (group 3)	28.28(6.53)	25.46(6.52)	25.26(5.29)
16—20 years (group 4)	28.31(7.55)	23.69(6.21)	24.25(6.73)
21—25 years (group 5)	29.00(6.10)	24.42(7.40)	25.53(6.26)
over 25 years (group 6)	28.57(7.41)	25.14(6.43)	25.07(4.94)

A Review of Sandplay Therapy

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Abstract

This paper describes the basic knowledge of Sandplay Therapy in detail. It includes the definition, background and origin, theory of sandplay therapy, different client populations, materials, the dimensions of sandplay, process and the role of the therapist. It introduces the current of sandplay research and the future of it.

Keywords: Sandplay therapy, Sandtray, Therapist

Contemporary constructivist theory has changed the psychotherapeutic landscape in at least twoways. On the one hand, constructivist theory provides a new lens for the interpretation and evaluation of modes of psychotherapy that have evolved and established themselves since the inception of the "talking cure" at the end of the last century. On the other hand, constructivist theory has also been the source of novel therapeutic approaches and strategies. Using constructivist Theory as a new lens from which to view sandplay therapy, our intention in this section is to highlight some of the constructivist themes evident in contemporary sandplay theory and practice (Malinda & Willian, 2000, p135).

Definition

Sandplay therapy has been defined as a psychotherapeutic technique that enables clients to arrangeminiature figures in a sandbox or sandtray to create a 'sandworld' corresponding to variousdimensions of his/her social reality (Dale & Wagner, 2003, p17).

Background and Origin

Sandplay has an accelerating history. It goes back to an early decade of the last century when H.G. Wells wrote about his observing his two sons playing on the floor with miniature figures and his realizing that they were working out their problems with each other and with other members of the family. Twenty years later Margaret Lowenfeld, child psychiatrist in London, was looking for a method to help children express the "inexpressible." She recalled reading about Wells' experience with his two sons and so she added miniatures to the shelves of the play room of her clinic. The first child to see them took them to the sandbox in the room and started to play with them in the sand. And thus it was a child who "invented" what Lowenfeld came to identify as the World Technique.

Despite Lowenfeld's valuable contribution to child psychotherapy, it was not until the late 1950s that the potential of her "World Technique" for adults was realized by Dora Kalff. Kalff learned about Lowenfeld and the "World Technique" at an international conference in Zurich, then she went to London to study with Lowenfeld. At the same time, she completed her analytic training with Emma and Carl Jung and developed her own version lf sandplay by combining Eastern thought. She soon recognized that the technique not only allowed for the expression of the fears and angers of children, but also encouraged and provided for the processes of transcendence and individuation she had been studying with C.G.Jung. As she developed the method further, she gave it the name "sandplay".

Theory of Sandplay Therapy

Sandplay therapy is a more generic term referring to a variety of effective ways of using sand, figures, and a container from different theoretical perspectives. Sandplay therapy emphasizes the spontaneous and dynamic qualities of the creative experience itself. The essence of sandplay is non-verbal and symbolic. In what Kalff called the "free and protected place" provided by the tray and the relationship with the therapist, children and adults play with sand, water, and miniatures over a period of time, constructing concrete manifestations of their inner world. When energies in the form of "living symbols" are touched upon in the personal and collective unconscious, healing can happen spontaneously within a person at an unconscious level. As a more harmonious relationship between the conscious and the unconscious develops, the ego is restructured and strengthened(Lauren Cunningham,1997, p1). The process of individuation is stimulated and brought to fruition (Dora M.Kalff, 1991, p1).

Uses of Sandplay with Different Client Populations

Because of sandplay therapy is a nov-verbal and symbolic, it is the most suitable for child. For example, sandplay can treat the children with language and communication difficulties(Carey.L.1990,p179), with attention deficits(Pearson.M.,2003,p204),with experienced trauma(Zinni.R.1997, p657),with behavioural difficulties(Allan.J.& Brown.K.1993, p30) and children from various cultural groups. With the development of sandplay, it can be used for adolescent and adult more and more, therapists often combine the sandplay therapy with family therapy and group therapy

Materials

In sandplay, the client creates a three-dimensional scene in a tray of sand using a selection of miniatures. Therapists usually provide two trays for clients. Each approximately 30×20×3 inches in size (in our country, the size is 57×72×7cm), as this dimension allows the client and therapist both to view the entire tray in one glance without moving their eyes and heads.

The interior of both trays is painted blue (dark blue on the bottom and lighter blue on the sides) to give the impression of water or sky when the sand is moved aside.

One tray typically holds dry sand and the other has wet sand with a container of water nearby, so clients can add water if they so desire (Mitchell& Friedman,1994).There are many kinds of sand' colour, each serve different symbolic functions, for example, brown/earth, white/snow, and mixture of white and brown/seashore. Furthermore, wet sand could be used for tunnel making and molding

The sandplay therapy room should contain a wide variety of miniatures. There is no standard collection of miniatures ,bur common categories include: people(domestic, military, fantasy, mythological, from various historical periods , of many nationalities and races, and in various functions), animals (wild, domestic, fantasy, prehistoric, zoo, farm, and marine),buildings (religious and nonreligious schools, castles, and houses), vegetation (trees, bushes, plants, vegetables, and flowers), vehicles (land, air, water, space, and war machines), structures (fences, gates, bridges, doorways, and corrals), natural objects (rocks, stones, woods, seashells, pinecones, feathers, bones and eggs), symbolic objects (wishing wells, treasure chests, jewellery, and glass marbles), and so on(Mitchell.& Friedman,1994).

The Dimensions of Sandplay

We can record the sandplay with pen and camera, in order to research sandplay, we should examine various dimensions of the sandplay (Cymthia R.Mathis, 2005, p16), the type of miniatures, the number of miniatures, the process of making the tray, the process of oriented behaviors within the tray, the time of making the tray, the interaction of eye contacting and verbal statements, the use of the sand, the space station, the theme of the sandplay, and so on.

Process

Most commonly, the sandplay process consists of two central stages. The first involves the construction of the sand picture, shere the perceived needs for the counseling session and the intentions of the facilitator guide the specific instructions given to the child. However, sandplay pictures are generally considered to be a projection of the child's internal experiential world and a representation of his/her world view (Dale &Wagner, 2003, p17).

After the completion of the sand picture, if the child is comfortably able to engage in verbal communication, the second stage of the process involves their sharing of a story or narrative about the sand picture they have created. This stage of the process allows client to clarify personal meanings and to integrate new feelings and insights that may have emerged through the creation of the sand picture.

The Role of the Therapist

As we know, the traditional psychological therapy methods often emphasize the interpretation and help the client find the way to cure, but the sandplay therapy asks the therapist to "do nothing". Dora Kalff once said, "It is harder to do nothing than to do something."(Linda Ellis Dean,1996, p1). The silent respectful acceptance of the images created during the sandplay process allows the client to feel increasingly safe and free. As this happens the images seem to come less from the ego and personal unconscious, and more from the deeper levels of the human psyche, or the collective unconscious.

If, as Jung believed, the human psyche has the ability to regulate its own path toward wholeness, healing comes from this deep level of the psyche rather than from outside.

So the therapist must be capable of establishing a free and protected space, they should possess an openness that is the fruit of an open encounter with one's own dark and unknown sides.

In order to be capable of carrying out the sandplay task,the therapist, in addition to psychological training, must be able to fulfill another prerequetite. Since the sandplay process expresses itself in a symbolic language, a profound knowledge of the language of symbols - as expressed in religions, myths, fairytales, literature, art, etc. - is

indispensable(Kalff,1991,p1). This applies especially to the depth- psychology interpretation of symbols as developed by C. G. Jung. Above all, one must have experienced these symbols and their efficacy on the basis of one's own psychic maturation process. Only this practice makes it possible to accompany the client's experience effectively.

Current Sandplay Research

Nowadays sandplay research has not kept pace with the descriptive work associated with sandplay theorists and therapists. This has probably been due to Kalff's and his followers' focus on the "subjective exploration of the symbolic meaning behind the selected figures and movement in the scenes" (Mitchell& Friedman, 1994), so several researchers have attempted to remedy this issue in a number of areas. First, researchers have attempted to identify common patterns of meaning associated with specific symbols or comfigurations in the sand (Cymthia R.Mathis, 2005, p16). The Story of a Sexually Abused Child's Sandplay. Second, researchers have attempted to study similarities and differences in sandworlds between different clinical and nonclinical groups. Charateristics of Sandplay Productions of Test Anxious Junior High School Students (Chen Shun-sen&Zhang Risheng, 2006, p117). Third, researchers have focused on the validity and reliability of the technique itself, rather than its symbolic interpretation or diagnostic and therapeutic applications (Aoki S, 1981, p25). The reliability of the Sandplay technique. Fourth, researchers have attempted to create instruments or various rating techniques to describe variables such as the participant's process in creating the sandworld, the resulting structure and content of the sandworld, and the meaning or interpretation of the sandworld. (Pennington's, 1996). "Sandtray Assessment of Development(SAD)". Fifth, the sandplay has been introduced to schools. (Saran Goss& Marilym A Campbell, 2004, p211): The Value of Sandplay as a Therapeutic Tool for School Guidance Counsellors. Sixth, researchers have studied the correlation between the age, the intelligence,the mental health with the producing of the sandplay. The world test: Developmental aspects of a play technique. (Kamp&Kessler, 1970, p81).

The Shortage of the Sandplay Therapy

The sandplay therapy is a deeper psychological method, the therapist must master the Jung's analysis psychology, so it is very abstract, subjective and controversial. In the research of demonstration, there are some problems: the internal walidity of the sandplay is threatened, many sandplay therapy has few sample, which may limit its extension.

The Future of Sandplay Therapy

It is our strong belief that knowledge of the past history and present status of sand tray technique will facilitate conscious choices about the future directions of sandplay. First, the research of the sandplay therapy will come to a whole. Second, the sandtray form and sandplay orgnization will become diversity. Third, various analized dimensions will emerge. Forth, some model technology will be introduced to the sandplay therapy.

In a word, sandtray reflects man's inner world, it is a long way to explore the sand world. With the development of society and human, new research subject will come forth, only pay attention to the sand world, we might exploit more and more field of researchment and application of sandplay therapy.

References

Allan.J. & Brown.K. (1993). Jungian Play Therapy in Elementary Schools. *Elementary School Guidance and Counseling,* 28:30-42

Aoki S. (1981). The retest reliability of the Sandplay technique. *British Jiurnal of Projictive Psychology and Personality.* 26(2): 25-33.

Carey.L. (1990). Sandplay Therapy with a Troubled Child. *The Arts in Psychotherapy,* 17:179-209.

Chen Shun-sen, & Zhang Risheng. (2006). *Charateristics of Sandplay Productions of Test Anxious Junior High School Students. Zhangzhou Normal College,* 3:117-121.

Cymthia R.Mathis. (2005). The Story of a Sexually Abused Child's Sandplay: A Single Case Study.

Dale.M.& Wagner.W. (2003). Sandplay: An Investigation into a Child's Meaning System Bia the Self-confrontation Method for Children. *Journal of Constructivist Psychology,*16:17-36

Dora M.Kalff. (1991). Introduction to Sandplay Therapy. *Journal of Sandplay Therapy,* V1, NO.1.

Kamp&Kessler. (1970). The world test: Developmental aspects of a play technique. *Journal of Child Psychology and Psychiatry,* 11:81-108.

Lauren Cunningham. (1997). What is Sandplay Therapy? *Journal of Sandplay Therapy,* V6, NO.1.

Linda Ellis Dean. (1996). Doing Nothing—One more Approach to Sandplay Therapy. *Journal of Sandplay Therapy,* V5, NO.1.

Malinda A.Dale&Willian J.Lyddon. (2000). Sandplay: A Constructivist Strategy For Assessment And Change. *Journal of Constructicist Psychology,* 13:135-154

Mitchell.R.R.& Friedman.H.S. (1994). *Sandplay: Past, present and future.* Londom:Routledge

Pearson.M. (2003). Guidance Officer and Counsellor Perspectives on Using Wxpressive Therapies to Help Students. *Australian Journal of Guidance and Counselling,*13:204-223.

Pennington's. (1996). Sandtray Assessment of Development(SAD)

Saran Goss, & Marilym A Campbell. (2004). The Value of Sandplay as a Therapeutic Tool for School Guidance Counsellors. *Australian Journal of Guidance and Counselling,* 14(2):211-232.

Zinni.R. (1997). Differential Aspects of Sandplay with 10-and 11-year-old Children. *Child Abuse & Neglect,* 21:657-668

Linking the 'Big Five' Personality Domains to Organizational Citizenship Behavior

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Abstract

The aim of the present study is to explore the linkages between personality and organization citizenship behavior (OCB) using a field sample. Big-Five personality model was used to explore the relationship between personality and OCB. The participants in the study were 187 doctors working in medical college in north India.   Four of the 'big five' factors except Neuroticism were positively correlated with OCB. Hierarchical regression analysis on data after controlling for demographic variables indicated that, Conscientiousness, Extraversion, Agreeableness and Neuroticism were valid predictors for OCB. However, Openness to experience showed no significant relationship with overall measure of OCB. Theoretical and practical implications of the study are discussed.

Keywords: Personality, OCB, Conscientiousness, Extraversion, Agreeableness, Neuroticism, India

1. Introduction

Nearly four decades ago, Katz (1964) pointed out the importance of a class of discretionary and spontaneous behaviors that are beyond explicit role requirements, but that are essential for organizational effectiveness. Smith, Organ and Near (1983), in a report of empirical research on the nature and antecedents of such behaviors, conceptualize these contributions as "organizational citizenship behavior" (OCB), later defined by Organ as **"**individual behavior that is discretionary, not directly or explicitly recognized by the formal reward system, and that in the aggregate promotes the effective functioning of the organization" (Organ, 1988). These behaviors are rather a matter of personal choice, such that their omission is not generally understood as punishable. OCBs are thought to have an important impact on the effectiveness and efficiency of work teams and organizations, therefore contributing to the overall productivity of the organization.

Organizational Citizenship Behaviors (OCB) are discretionary behaviors on the part of the worker, which are neither expected nor required, and therefore cannot be formally rewarded or punished for the presence of lack of, by the organization. Schnake (1991) gives three reasons why OCB are not affected by organizational influences: (1) OCB are subtle and therefore hard to objectively rate, which makes for difficult inclusion in appraisals; (2) Some forms of OCB may pull people away from their own work to assist another; and (3) Because OCB cannot be contractually required (if they were required behaviors, they would be contractual behaviors, not OCB), the organization cannot punish employees for not performing them. For this reason, OCB is commonly defined in terms of social exchange (Moorman, 1991).

In recent years, there has been increasing interest among the researchers to explore the contextual and dispositional factors responsible for eliciting "Organization Citizenship Behavior" (OCB). Researchers have started to pay more attention to understand the dynamics of and to develop normative theories of extra-role employee behavior that are thought to contribute positively to overall organizational performance (Erturk, Yilmaz & Ceylan, 2004). Every factory, office, or bureau depends daily on a myriad of acts of cooperation, helpfulness, suggestions, gestures of goodwill, altruism, and other instances of what we might call citizenship behavior. A workforce that is committed and go beyond the demands of the duty is a key asset of the organizations in today's world of competition where survival of the organizations itself is a big challenge. Organizations could not survive or prosper without their members behaving as good citizens by engaging in all sorts of positive organization-relevant behavior. OCBs are thought to have an important impact on the effectiveness and efficiency of work teams and organizations, therefore contributing to the overall productivity of the organization. Because of the importance of good citizenship for organizations, understanding the nature and sources of (OCB) has long been a high priority for organizational scholars (Bateman and Organ, 1983; Organ, 1988) and remains to be so. Paine and organ (2000), pointed out that OCB is an important construct in organization behavior and in current westernized business literature.

Although there has been augmented research in the field of OCB, but all these studies have been done in western countries and explored its relationship with other variables rather than personality constructs. As such, the application of the 'Big Five' model may provide much needed integration in this literature. However, to date, we are not aware of any studies that have investigated the relationship between the 'Big Five' and OCB in Indian context. Therefore, the purpose of this study is to fill this research gap and assess the relationship between these constructs to better understand the dispositional basis of Organizational Citizenship Behaviors (OCB).

1.1 The Five-Factor Model of Personality

The 'Big Five' model implies that personality consists of five relatively independent dimensions that altogether provide a meaningful taxonomy for the study of individual differences. These five dimensions are Openness to Experience, Conscientiousness, Extraversion, Agreeableness and Neuroticism. Each of the Big Five dimensions is like a bucket that holds a set of traits that tend to occur together. Our interpretation of the Big Five directly corresponds to our measurement of the five-factor model of personality. **Openness to experience** refers the number of interests to which one is attracted and the depth to which those interests are pursued. The behavioral tendencies typically associated with Openness to Experience include being imaginative, cultured, curious, original, broad minded, intelligent (Digman, 1990), and having a need for variety, aesthetic sensitivity, and unconventional values (McCrae & John, 1992). **Conscientiousness** refers to the number of goals on which one is focused. It is related to dependability and volition and the typical behaviors associated with it include being hard working, achievement- oriented, persevering, careful, and responsible (Barrick & Mount, 1991). **Extraversion** refers to the level of sensory stimulation with which one is comfortable. The behavioral tendencies used to measure this factor include being sociable, gregarious, assertive, talkative, and active (Barrick & Mount, 1991). **Agreeableness** refers to the number of sources from which one takes one's norms for right behavior. The behavioral tendencies typically associated with this factor include being courteous, flexible, trusting, good-natured, cooperative, forgiving, soft-hearted, and tolerant (Barrick & Mount, 1991). **Neuroticism** refers to the number and strength of stimuli required to elicit negative emotions in a person. Typical behaviors associated with this factor include being anxious, depressed, angry, embarrassed, emotional, worried, and insecure (Barrick & Mount, 1991).

1.2 Organizational Citizenship Behavior (OCB)

Organizational Citizenship Behaviors (OCBs) are a special type of work behavior that are defined as individual behaviors that are beneficial to the organization and are discretionary, not directly or explicitly recognized by the formal reward system. These behaviors are rather a matter of personal choice, such that their omission is not generally understood as punishable. OCBs are thought to have an important impact on the effectiveness and efficiency of work teams and organizations, therefore contributing to the overall productivity of the organization.

Dennis Organ is widely credited with introducing OCB in academic literature. In the last three decades, it has grown to become a prominent stream of research. Scholars hold different views with respect to the dimensionality of OCB. Smith, Organ, and Near (1983) conceptualized OCB with two dimensions: altruism (behavior targeted specifically at helping individuals) and generalized compliance (behavior reflecting compliance with general rules, norms, and expectations). Later Organ (1988) identified five dimensions belonging to OCBs: Altruism - selfless concern for the welfare of others, helps others who have been absent, or helps others who have very high work loads. Courtesy- to take steps to try to prevent problems with other workers and not to abuse the rights of others. Civic Virtue- Attends meetings that are not mandatory, but considered important and keep abreast of changes in the organization. Conscientiousness- Does not take extra breaks. Obey company rules and regulations even when no one is watching and Sportsmanship- Does not consume a lot of time complaining about trivial matters. Focuses on the positive side rather than what's wrong. Largely based on Organ's (1988) five-dimension taxonomy, Williams and Anderson (1991) proposed a two-dimensional

conceptualization of OCB: OCB-I (behaviors directed toward Individuals; comprising altruism and courtesy) and OCB-O (behaviors directed toward Organization; comprising the remaining three dimensions in Organ's (1988) conceptualization). Some scholars also have utilized a unidimensional or overall OCB measure in their research (e.g., Decktop, Mangel, & Cirka, 1999). A most recent meta-analysis conducted by Hoffman, Blair, Meriac, and Woehr (2007) suggested that "current operationalizations of OCB are best viewed as indicators of a general OCB factor..., there is likely little to be gained through the use of separate dimensional measures as opposed to an overall composite measure" (p. 562). LePine, Erez, & Johnson (2002) on the basis of meta-analysis of 133 studies also suggested that the relationships among the dimensions of OCB are generally as high as reliability estimates and that there are no meaningful differences in relationships with predictors across dimensions. They also reported that, it appears that predictive relationships with the broader OCB criterion were as good as, or superior to, those with the narrower dimensional criteria. Accordingly, the dimensions of OCB as currently operationalized by the majority of scholars perhaps may be best thought of as imperfect indicators of OCB. Consistent with this idea, it might be worthwhile to begin explicitly defining OCB as a latent construct. To date, such a conceptualization has not been explicitly stated in the literature. In consistent with the suggestion based on the meta-analysis of Lepine et al. (2002), we used an overall composite measure of OCB as opposed to the use of separate dimensional measures.

1.3 Relationships between the Big Five and Organizational Citizenship Behavior

Interestingly, the theoretical basis for predicting behavior from personality and the prediction of behavior from general attitudes rests on very much the same considerations. That is, measures of personality hardly account for much variance in specific behaviors in tightly controlled situations (Organ, 2004). Personality has predictive power only in what Mischel (1977) calls "weak situations." Weak situations are those devoid of compelling external incentives and lacking in "demand characteristics" for behavior. Furthermore, Epstein (1980) demonstrated that measures of personality attain maximum predictive power when the behavioral criterion is an aggregate of thematically related behaviors across time and situations.

It would seem that OCB by its very nature would represent behavior that occurs in weak situations. Moreover, if OCB is measured by ratings of how participants characteristically respond to such situations--i.e., the extent to which they spontaneously respond in cooperative, altruistic, and conscientious fashion--we would expect that such ratings would operationally capture aggregation trends across many instances and opportunities for so responding. In sum, we should expect to find in OCB the kind of "performance" that is attributable to personality.

1.3.1 Openness to Experience

Openness to experience is marked empirically by such adjectives as imaginative, cultured, curious, original, broad minded, intelligent (Digman, 1990), and having a need for variety, aesthetic sensitivity, and unconventional values (McCrae & John, 1992). Importantly, individuals high on openness to experience display a preference for variety, they enjoy grasping new ideas, and they have an intrinsic interest in and appreciation for novelty. Thus, the study expects that persons high on openness to experience are more likely to show OCB. Thus,

Hypothesis 1: Openness to experience will be positively related to OCB.

1.3.2 Conscientiousness

Conscientiousness refers to the number of goals on which one is focused. It is related to dependability and volition and the typical behaviors associated with it include being hard working, achievement- oriented, persevering, careful, and responsible. People who are high in conscientiousness generally perform better at work than those who are low in conscientiousness (Barrick & Mount, 1991). Conscientious individuals can perform their part of the work with a minimum of oversight (Morgeson, Reider & Campion, 2005). Moreover, conscientious individuals are dependable, efficient, and hardworking. They are predisposed to take initiative in solving problems and are more methodical and thorough in their work (Witt, Burke, Barrick & Mount, 2002). It seems reasonable that these traits would result in higher OCB performance. Thus,

Hypothesis 2: Conscientiousness will be positively related to OCB.

1.3.3 Extraversion

Extraversion refers to the level of sensory stimulation with which one is comfortable. The behavioral tendencies used to measure this factor include being sociable, gregarious, assertive, talkative, and active (Barrick & Mount, 1991). Barrick, et al. (2005) has described extraversion as key dispositional determinant of social behavior. Thus, those who are highly extraverted display more flexible behaviors that make them more likely to show OCB.

Hypothesis 3: Extraversion will be positively related to OCB.

1.3.4 Agreeableness

Agreeableness refers to the number of sources from which one takes one's norms for right behavior. The behavioral tendencies typically associated with this factor include being courteous, flexible, trusting, good-natured, cooperative, forgiving, soft-hearted, and tolerant (Barrick & Mount, 1991). In work contexts, agreeable employees show higher levels of interpersonal competence (Witt et al., 2002) and collaborate effectively when joint action is needed (Mount et al., 1998). Thus, it is expected that persons high on agreeableness are more likely to perform OCB.

Hypothesis 4: Agreeableness will be positively related to OCB.

1.3.5 Neuroticism

Neuroticism refers to the number and strength of stimuli required to elicit negative emotions in a person. Persons who are high on this dimension are usually anxious, depressed, angry, embarrassed, emotional, worried, and insecure (Barrick & Mount, 1991). Barrick, et al. (2005) has described neuroticism as key dispositional determinant of social behavior. Thus, those who are low on this dimension should be able to display OCB.

Hypothesis 5: Neuroticism will be negatively related to OCB.

2. Method

2.1 Participants and Procedures

This study includes 187 doctors working in medical college in north India. The sample was defined as permanent staff members who have been working in the present organization for more than two years. The gender composition of the sample was 53.47% male (N = 100) and 46.52 % female (N = 87). The age of the employees ranges between 32 and 42 with mean age of 38.47 years (SD= 5.42). Respondents have been in their present organization an average of 4.06 years (SD= 1.37). 200 questionnaires were filled but 13 were rejected as they were incomplete. The analysis of this research was based on 187 complete questionnaires.

2.2 Variables

2.2.1 Control Variables – Gender and Tenure

Although Organ and Ryan's (1995) meta-analysis did not find any significant relationships with gender and tenure, it was based on a very small number of studies (four to five), and there have been some studies that found gender to be associated with extrarole behaviors (e.g., Allen, 2006; Morrison, 1994). We therefore controlled for age, gender (1 =male, 0 =female) and occupational tenure (measured in years) in this study.

2.2.2 Predictor Variables – Big Five Personality Factors

We used the 50 items scale (10 items for each facet) from International Personality Item Pool (IPIP) to assess the five-factor model of personality. This fifty-item scale is measured on a Likert-type anchoring ranging from very inaccurate (1) to very accurate (5), and contains five dimensions corresponding to the five factors of personality: Extraversion, Neuroticism, Agreeableness, Openness, and Conscientiousness. Sample items for each of the dimensions are as follows: ''I make friends easily'' (for Extraversion), ''I have frequent mood swings'' (for Neuroticism), ''I accept people as they are'' (for Agreeableness), ''I enjoy hearing new ideas'' (for Openness), and ''I make plans and stick to them'' (for Conscientiousness). The reliabilities for each facet were as follows: Extraversion (.86), Neuroticism (.83), Agreeableness (.77), Openness (.82), and Conscientiousness (.81).

2.2.3 Dependent Variable – Organization Citizenship Behavior

OCB was measured with the 30-item scale developed by Bakhshi and Kumar (2009). Responses were made on a five-point scale (*Never-1, Rarely-2, Sometimes-3, Frequently-4, Always*). A sample item states, ''I help my coworkers in non-work matters.'' The test is standardized on Indian sample and the reliability of the scale was 0.82.

3. Results and Discussion

Table 1 lists the means, standard deviations, partial correlations, and reliabilities for the variables. The partial correlations provided some initial support for our hypotheses. In support of Hypothesis 1, Openness to experience was positively correlated with OCB ($r = .18$, $p < .05$). Conscientiousness was positively correlated with OCB ($r = .28$, $p < .01$), supporting Hypothesis 2. In support of Hypothesis 3, Extraversion was positively correlated with OCB ($r = .17$, $p < .05$). Agreeableness was positively correlated with OCB ($r = .50$, $p < .01$), supporting Hypothesis 4. In support of Hypothesis 5, Neuroticism was negatively correlated with OCB ($r = -.23$, $p < .01$).

INSERT TABLE 1 ABOUT HERE

A hierarchical regression analysis was performed to test our hypotheses for overall measure of OCB. Our goal was to determine if the BIG FIVE personality dimensions added a unique contribution in the prediction of the criterion (OCB) above and beyond the control variables. As such, we first entered the control variables (e.g., demographics) into the

equation. Next, we added the hypothesized personality dimensions. In the discussion of our results all reported coefficients are standardized.

INSERT TABLE 2 ABOUT HERE

Table 2 shows that, as a set of predictors, the big five personality domains explained an additional 23% of variance in the criterion over and above the control variables ($\Delta F = 3.72$, $p < .05$). Specifically, Conscientiousness significantly related to overall OCB Measure ($\beta = .32$, $p < .01$), supporting hypothesis 2. In support of hypothesis 3 and 4 extraversion ($\beta = .19$, $p < .05$) and agreeableness ($\beta = .53$, $p < .01$) are also related with OCB. Also neuroticism is negatively related with overall OCB measure ($\beta = -.27$, $p < .01$), providing support for hypothesis 5.

The present study examines the relationship between personality traits, as expressed by the five factor model, and overall OCB. The results, in general, support FFM as a predictor of OCB. Current results suggest that the five-factor model serves as an informative framework in examining the dispositional sources of organizational citizenship behavior. Specifically, conscientiousness, agreeableness and neuroticism emerged as the most consistent predictor, significantly relating to OCB. Consistent with the previous findings from a variety of meta-analytic research studies have found that conscientiousness, extraversion, agreeableness, and emotional stability are positively related to different aspects of contextual performance (e.g., Hogan & Holland, 2003; Hough, 1992, Hurtz & Donovan, 2000; Organ & Ryan, 1995).

Thus, the interaction between extraversion, agreeableness and OCB is the main contribution of this study. The results show that extraversion and agreeableness are important predictors of OCB. However, these results are contrary to the previous studies that report the lack of any significant relationship between both extraversion and agreeableness, and OCB. One possible explanation for this finding is individuals who score high on extraversion display more flexible behaviors that make them more likely to show OCB and individuals who score high on agreeableness tend to be courteous, flexible, trusting, good-natured, cooperative, forgiving, soft-hearted, and tolerant; all individual traits that would result in higher OCB performance. Thus, this research suggests that extraversion and agreeableness are an important personality trait in order to predict OCB. However, Elanain (2007) found that openness to experience is the most important predictor of OCB.

Konovsky and Organ (1996) predicted that agreeableness would relate particularly with altruism, courtesy, and sportsmanship, whereas conscientiousness would relate with generalized compliance. The statistically significant correlations they came up with were quite weak: 0.12 between agreeableness and courtesy and 0.15 between conscientiousness and generalized compliance. The results of regression analyses showed that, with the exception of generalized compliance, the dispositional variables could not predict significant variance in OCB beyond that predicted by work attitudes. However, in the case of generalized compliance, the personality dimension of conscientiousness was the strongest predictor of all, accounting for unique variance on the impersonal dimension of OCB. Finally, the results of a recent study conducted in Greece did not show any significant relationship between personality and OCB (Nikolaou and Roberston, 2001).

In summary, the findings of this study suggest that when assessing how effective one is in performing OCB, all of the big five personality domains will be important predictors. Among these five traits, the present study suggests that conscientiousness, agreeableness and neuroticism are the most important predictor of OCB.

3.1 Theoretical and Practical Implications

Theoretically, the current results suggest that that individual difference play an important role in predicting whether an employee would exhibit OCB, extending the validity of the dispositional basis of OCB. Hence, the present study suggests that some people, because of who they are, would be more likely to show OCB. The results also imply that the Big Five is a useful framework to explain the personological basis of OCB. It should be noted that other frameworks such as the PA NA typology of affective dispositions can, and have, been used to explain the dispositional sources of OCB. Nevertheless, two reasons encourage the use of the five-factor model. First, compared to the PA–NA typology, the five-factor model contains three additional traits that are important to the prediction of overall OCB. Second, as Judge, Heller and Mount (2002) argued, PA and NA are less stable than other dispositional measures and may be confounded with life satisfaction. Practically speaking, the past two decades have witnessed a revolution in personnel selection largely due to the publication of meta-analyses demonstrating that the Big Five have significant correlations with important job criteria (Barrick & Mount, 1991; Salgado, 1997). The results of this study suggest that OCB may be placed on an important place on this list of constructs that are related to personality. Given that OCB's are very important for the smooth functioning of the organization and its direct effect on work performance, instead of only focusing on post-entry work experiences, organizations may also adopt selection procedures based on personality measures to evoke high levels of OCB from their employees.

3.2 Limitations and Future Directions

Like all research, this study also has certain limitations that must be taken into consideration. First, the data were cross-sectional in nature and this restriction prevents the inference of causality. At a minimum, a longitudinal design is

required to infer any causality that may exist among these variables. Second, the results may have been affected by common method bias because all of our data were collected from self-report measures. A primary concern of common method variance is that the relationships observed between variables may be due to the measurement method rather than the hypothesized relationships between constructs (Podsakoff & Organ, 1986). In addition, research has suggested that the effects of common method variance may be reduced if items on a questionnaire are reordered such that the dependent variable follows the independent variable (Podsakoff & Organ, 1986). This method was followed in the design of our questionnaire.

Finally, the effect sizes for the relationships of interest were relatively small. This suggests the possibility of unknown moderator or mediator variables on the personality-OCB relationship, such as job satisfaction and perceived organizational justice. Unfortunately, data were not collected in regard to possible moderators or mediators because such hypotheses were beyond the scope of this study. These limitations aside, our findings have practical implications for organizational selection. Future studies may seek to explore the utility of using personality tests to predict organizational citizenship behavior in a selection setting.

References

Allen, T. D. (2006). Rewarding good citizens: The relationship between citizenship behavior, gender, and organizational rewards. *Journal of Applied Social Psychology,* 36, 120–143.

Bakhshi, A. & Kumar, K. (2009). National culture and organizational citizenship behavior: Development of a scale. In Singh, S. (Ed.), *Organisation Behaviour*. Global Publishing House: New Delhi.

Barrick, M. R., & Mount, M. K. (1991). The big five personality dimensions and job performance: A Meta Analysis. *Personnel Psychology*, 44, 1–26.

Bateman, T.S. & Organ, D.W. (1983). Job Satisfaction and the Good Soldier: The Relationship between Affect And Employee 'Citizenship'. *Academy of Management Journal*, 26, 587-595.

Decktop, J. R., Mangel, R., & Cirka, C. C. (1999). Getting more than you pay for: Organizational citizenship behavior and pay-for-performance plans. *Academy of Management Journal*, 42, 420–428.

Digman, J. M. (1990). Personality structure: Emergence of the five-factor model. *Annual Review of Psychology*, 21, 417–440.

Elanain, H.A. (2007). Relationship between Personality and Organizational Citizenship Behavior: Does Personality Influence Employee Citizenship? *International Review of Business Research Papers*, 3(4), 31-43.

Epstein, S. (1980). The stability of behavior: II. Implications for psychological research. *American psychologist*, 35, 790-806.

Erturk, A., Yilmaz, C. & Ceylan, A. (2004). Promoting organizational citizenship behaviors: Relative effects of job satisfaction, organizational commitment and perceived managerial fairness. *METU Studies in Development*, 31, 189-210.

Hoffman, B. J., Blair, C. A., Meriac, J. P., & Woehr, D. J. (2007). Expanding the Criterion Domain? A Quantitative Review of the OCB Literature. *Journal of Applied Psychology*, 92, 555-566.

Hogan, J. & Holland, B. (2003). Using theory to evaluate personality and job-performance relations: A socioanalytic perspective. *Journal of Applied Psychology,* 88, 100-112.

Hough, L. M. (1992). The "Big Five" personality variables-construct confusion: Description versus prediction. *Human Performance,* 5, 139-155.

Hurtz, G. M., & Donovan, J. J. (2000). Personality and job performance: The Big Five revisited. *Journal of Applied Psychology,* 85 (6), 869-879.

IPIP. (2009). A Scientific Collaboratory for the Development of Advanced Measures of Personality Traits and Other Individual Differences. International Personality Item Pool. [Online] Available: http://ipip.ori.org/

Judge, T. A., Heller, D., & Mount, M. K. (2002). Five-Factor model of personality and job satisfaction: A metaanalysis. *Journal of Applied Psychology*, 87, 530–541.

Katz, D. (1964). The motivational basis of organizational behavior. *Behavioral Sciences*, 9 131–146.

Konovsky, M. A. & Organ, D. W. (1996). Dispositional and contextual determinants of organizational citizenship behavior. *Journal of Organizational Behavior,* 17, 253-266.

LePine, J. A., Erez, A., & Johnson, D. E. (2002). The nature and dimensionality of organizational citizenship behavior: A critical review and meta-analysis. *Journal of Applied Psychology*, 87, 52-65.

McCrae, R. R., & John, O. P. (1992). An introduction to the five-factor model and its applications. *Journal of Personality*, 2, 175–215.

Mischel, W. (1977). The interaction of person and situation. Pp. 166-207 in D. Magnusson & N. S. Endler (Eds.), *Personality at the crossroads: Current issues in interactional psychology*. Hillsdale, N J: Erlbaum.

Moorman, R. H. (1991). Relationship between organizational justice and organizational citizenship behaviors: Do fairness perceptions influence employee citizenship? *Journal of Applied Psychology*, 76, 845-855.

Morgeson, F. P., Reider, M. H., & Campion, M. A. (2005). Selecting individuals in team settings: The importance of social skills, personality characteristics, and teamwork knowledge. *Personnel Psychology,* 58 (3), 583-611.

Morrison, E. W. (1994). Role definitions and organizational citizenship behavior: The importance of the employee's perspective. *Academy of Management Journal,* 37, 1543–1567.

Mount, M. K., Barrick, M. R., & Stewart, G. L. (1998). The five factor model of personality and performance in jobs that involve interpersonal interaction. *Human Performance,* 11(2/3), 145-165.

Nikolaou, I., & Robertson, I. T. (2001). The Five-Factor Model of personality and work behavior in Greece", *European Journal of Work and Organizational Psychology,* 10 (2), 16 –186.

Organ, D. W. (1988). *Organizational Citizenship Behavior - The Good Soldier Syndrome. (1st ed.).* Lexington, Massachusetts/Toronto: D.C. Heath and Company.

Organ, D. W. and K. Ryan (1995). A meta-analytic review of attitudinal and dispositional predictors of organizational citizenship behaviour. *Personnel Psychology,* 48, 775-802.

Paine, J. B., & Organ, D. W. (2000). The cultural matrix of organizational citizenship behavior: Some preliminary conceptual and empirical observations. *Human Resource Management Review*, 10, 45 – 59.

Podsakoff, P. M., & Organ, D. W. (1986). Self-reports in organizational research: Problems and prospects. *Journal of Management*, 12, 531–544.

Salgado, J. F. (1997). The five factor model of personality and job performance in the European Community. *Journal of Applied Psychology*, 82, 30–43.

Schnake, M. (1991). Organizational citizenship: A review, proposed model, and research agenda. *Human Relations,* 44, 735-759.

Smith, C. A., Organ, D. W., & Near, J. P. (1983). Organizational citizenship behavior: Its nature and antecedents. *Journal of Applied Psychology*, 68, 653–663.

Williams, L. J., & Anderson, S. E. (1991). Job satisfaction and organizational commitment as predictors of organizational citizenship and in-role behaviors. *Journal of Management*, 17, 601-617.

Witt, L. A., Burke, L. A., Barrick, M. R. & Mount, M. K. (2002). The interactive effects of conscientiousness and agreeableness on job performance. *Journal of Applied Psychology*, 87, 164-169.

Table 1. Means, standard deviations, partial correlations, and coefficient alphas of study variables

Variables	Mean	SD	1	2	3	4	5	6
Age	38.47	5.42						
Gender	.53	.43						
Occupational tenure	4.06	1.37						
1. Openness to experience	3.87	1.23	**(.82)**					
2. Conscientiousness	3.58	1.27	06	**(.84)**				
3. Extraversion	3.30	1.35	.22**	.23**	**(.81)**			
4. Agreeableness	4.09	1.29	.14	.27**	.20**	**(.88)**		
5. Neuroticism	2.89	1.56	-.19*	-.21**	.90**	-.26**	**(.90)**	
6. OCB	4.12	1.32	.18*	.28**	.17*	.50**	-.23**	**(.86)**

Notes: N = 187.

*p < .05.

**p < .001 (two tailed).

Table 2. Hierarchical regression analysis for big five personality domains and overall OCB measure

Step	Predictors	β (Step 1)	β (Step 2)
	Intercept	4.51**	3.79**
1	Age	.04	.03
	Gender	-.05	-.05
	Occupational Tenure	.07	.06
2	Openness to experience		.15
	Conscientiousness		.32**
	Extraversion		.19*
	Agreeableness		.53**
	Neuroticism		-.27**
	R^2	.02	.08
	Change in R^2		.23
	Overall F	.54	1.08
	Change in F	.68	3.72*

Note: N = 187.

*p < .05.

**p < .001.

What Is Cross-cultural Research

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Abstract

This paper discusses the major principles and methods of cross-cultural research, particularly how to test hypotheses on worldwide samples of cultures. The major purpose of this presentation is to encourage an increase in cross-cultural research by showing that it is not hard to do.

Keywords: Cross-cultural Research, principles, methods, hypotheses, Background, Perspectives, Subcultures, Research Process, Types, Features, Ethical Issues, & Implications.

1. Introduction

Cross-cultural research is a scientific method of comparative research which focuses on systematic comparisons that compares culture to culture and explicitly aims to answer questions about the incidence, distributions, and causes of cultural variation and complex problems across a wide domain, usually worldwide. Such questions include:

• What are the patterns of coherence and sources of coherence in the practices, beliefs, social roles, norms, expressions, and forms of organization and conflict in a) human communities? b) Other forms of groups? c) Other extra-community trajectories?

• How much of that coherence is due to a) Common history, language, identity? b) Common or recurrent modes of adaptation to recurrent human problems? c) recurrent consistencies in how language, discourse and expression, social and d) Roles, norms and organizations constructed into shared cultures?

• What are the patterns of decoherence and disjuncture, misunderstanding and conflict that arise given the a) multiplicity and overlapping of cultures? and b) cleavages and disjuncture of cultures?

Cross-cultural research strives to arrive at reliably supported explanations of why things are the way they are (Hempel, 1965; Nagel, 1961) (Note 1)

To compare culture is not to deny their individual uniqueness. Cross-culturalists do not deny the uniqueness of culture; uniqueness and similarity are always present, simultaneously. Cross-cultural research deals with what is general, what is true for some or even all human cultures.

Results of Cross-cultural research are generalizable to all types of society from a small hamlet with population in the hundreds or a few thousands to urban societies with population in the hundreds of millions. It helps researchers to make general (cross-cultural) statements about the similarities and differences of cultures and to identify what may be universal and variable about human cultures, as well as to discover reasons why the variation exists *(see Figure 1).*

Cross-cultural psychologists generally collect primary data, they do not make use of secondary data derived from national surveys on issues such as crime rate, gross national product, etc. however, their comparison tend to be limited often only to two-cultures (the investigator's own and one other).
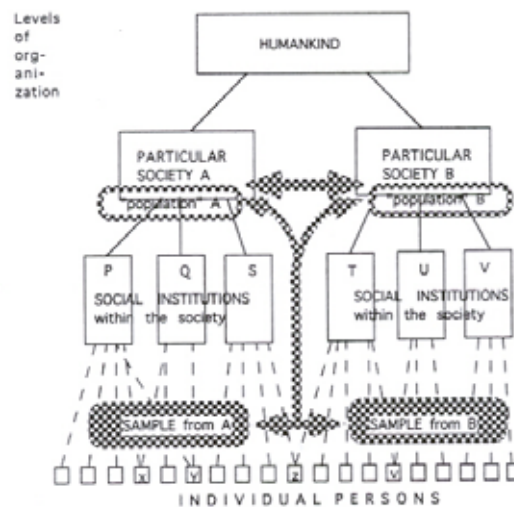
Figure 1. Creating generalized knowledge through sample-to-population inference

2. Historical Background

The history of cross-cultural comparison dates back to the late 19th century when Edward B. Tylor made the move into modern cross-cultural analysis with his statistical methodology explained in school's modern premiere paper, "On a Method of Investigating the Development of Institutions, Applied to Laws of Marriage and Descent" (1889). William Graham Sumner later compiled and wrote most of the massive four-volume "The Science of Society" (1927) which was completed after Sumner's death, including the index, by A.G. Keller (Harris 1968:607).

George Peter Murdock developed the Cross Cultural Survey in the 1930s-40s at Yale, as head of the Human Relations Program. This beginning grew into the Human Relations Area Files, which is now available in over 250 institutional libraries in Africa and abroad.

George P. Murdock combined the modern statistical method with modern ethnography, and statistical cross-cultural comparative method to create the HRAF. Murdock compiled the "Ethnographic Atlas, "which was published in "Ethnology," a journal that Murdock founded in 1962. This is an atlas of the 600 societies described on the basis of several dozen coded features in Murdock's "World Ethnographic Sample."

Driver (1967) (Note 2) reanalyzed Murdock's "Ethnographic Atlas" using the two basic approaches of statistical analysis for anthropology—the cultural traits as units of analysis, as proposed by Tylor and Murdock, and the approach suggested by Boas and Kroeber, by using societies or tribes as the units of analysis. Driver combined the concepts of these two approaches and came up with a more sophisticated method by inductively determining culture areas or "sets of strata" (Seymour-Smith 1986:61).

3. Perspectives in Cross-Cultural Psychology

Basically, there are two types of perspectives in cross-cultural psychology: the Absolutist Approach and the Relativist Approach. The absolutists view in cross-cultural psychology is that psychological phenomena are basically the same in all cultures while the relativists view in cross-cultural psychology is that psychological phenomena should be studied only from "within" a culture where these phenomena occur.

4. Types of Cultures: Subcultures or Populations

Culture is a matrix of behaviours, beliefs, practices and values that typifies a particular group of people. It deals with a variety of things that influence all aspects of behaviour; emphasizes group influence rather than individual variability and essential part of the meaning-formation process.

Human communities have a variety of practices, beliefs, social roles, norms, expressions, forms of organization and conflicts (economic, political, legal, religious, expressive and artistic) that exhibit various sorts of internal coherence as well as cleavages within communities. These coherences and cleavages bear many close connections to the different historical experiences, physical and social environments in which people live. They include configurations of elements and characteristic ways of interrelating that are shared with neighbouring and interacting groups, and shared among dispersed groups that have common historical experiences and similarities, including common origin, common membership in historical civilizations, and languages that are mutually understood or that derive common families. Lines of cleavage, conflict, and marginality, of course, are part of cultural phenomena. Elements and relationships that

individuals or communities have in common are shared in a variety of ways. Some, such as the more intensive patterns of interaction that derive from common residence, joint experience, and discourse in a common language or system of signs, are relatively well bounded. Other patterns of sharing or similarity derive from processes of dispersal: migration, Diasporas, the trajectory of lives lived through spatial movements, social mobility, careers, and distinctive histories. Interactions are by no means limited to localities, but to the trajectories of inhabitants who move through and between localities.

Cultures consist of shared constructions that emerge out of social interactions of sets of individuals who inhabit overlapping social and physical spaces. Coherence may be viewed as an emergent property, but may be present or absent to varying degrees and along varying dimensions or trajectories.

5. Three Central Questions Revolving Around the Study of Culture

Murdock and White (1969), in creating the Standard Sample for Cross-Cultural Research, raised three central questions that revolve around the study of culture. First, what are the foci of study? Second, what are the issues of coherence or de-coherence within the foci studied? Third, how do these issues apply between foci?

First, there is the problem of what it is that one wants to study in terms of foci: in their case, Murdock and White (1969: 331) take up the issue of sampling the diversity of human communities in order to learn something about coherence or decoherence within and between communities. Comparing communities (through ethnographies) is not the only approach to cultural comparisons, but it is the one that focuses on clusters of people who inhabit, at least in part, specific and stable community sites which are often the loci of ethnography. Other standard samples could be those devoted to the study of: migration; institutions and organizations; particular types of cultures; subcultures or populations. Their insistence on this point is not on communities as representatives of larger cultures, but on communities at pinpointed times and places in which ethnographic study has been sufficiently well carried out. That is, it is possible to list, from the ethnography, what specific bundles of practices, beliefs, social roles, norms, expressions, forms of organization and conflicts (economic, political, legal, religious, expressive and artistic) are present in each of the specific times and places of the distinct ethnographic foci that constitute the sample.

Second, there are the problems and issues of coherence or de-coherence within the foci studied, as in the comparative study of human communities. The functionalist approach to ethnography was vastly over generalized in its heyday, which lasted from the 1920s through the 1970s. Murdock and White (1969:329-330) emphasize the weakness of the functionalist arguments that were commonly used by ethnographers to argue for the cultural coherence of the communities they studied. Functional linkage of traits asserted by an ethnographer in one society, for example, are often contradicted that one trait but not the other is present in a similar neighboring society, or by the fact that the traits do not correlate across societies.

Third, there is the problem and the issues of coherence or de-coherence between foci in the study of human communities due to common historical origin or experience. Murdock and White (1969:330) note that the conjectures of those anthropologists who attempt to reconstruct culture history on the basis of trait similarities are not notably superior to those of ethnographers who investigate functional relationships.

6. The Cross-Cultural Research Process

The research process in cross-cultural study is circular in nature (*as indicated in Figure 2 above*), with built-in evaluation mechanisms at each stage of the process, which may cause the researcher(s) to re-evaluate decisions made at previous stages. McGrath (1982, p. 71) stated that cross-cultural research should be viewed as a series of "logically ordered – though chronologically chaotic – choices" about potential cultural *ki's*.
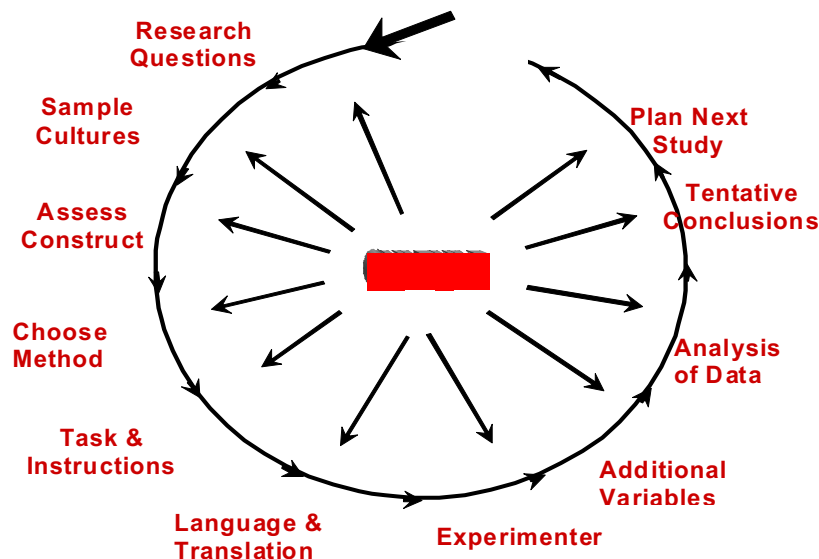
Figure 2. cross-cultural research process

7. Types of Cross-cultural Research

There are several types of cross-cultural research. The first of which is Regional comparative cross-cultural research which is well represented by the works of Kroeber and Driver. This approach is an attempt to define classifications of cultures and to then make inferences about processes of diffusion within a cultural region (Levinson and Ember 1996:263). Regional comparativists are likely to know a lot about each society in a within-region comparison but may not know all the cases in the region that depends mostly on the size of the region (Burton & White, 1991).

Next is small-scale regional comparison advocated by Fred Eggan (1954) (Note 3) who called it "controlled comparisons" on the assumption that it may make it easier to rule out possible effects of similarity in history, geography, and language. His assumption was that researchers could readily discern what accounts for some aspect of cultural variation within the region if history, geography and language were held constant. This is the approach toward smaller scale comparative studies. Eggan suggests the combination of the anthropological concepts of ethnology with structure and function, allowing the researcher to pose more specific questions on a broader range of subjects (1961, 125-127) (Note 4). An example of this type of study is Spoehr's study which examined the changes in kinship systems among the Creek, Chickasaw, and Chocktaw, and other regional tribes of the Southeast after their removal to the Oklahoma reservations. Spoehr detailed these changes with an analysis of the historical factors responsible for them and the resulting processes (Eggan 1961, 125-126) (Note 5).

Another type is large-scale within-region research (using data on all or most of the cultural traits in the region) which generally tries to arrive at classifications of cultures in order to make inferences about processes of diffusion and historical ancestry (Burton & White, 1991). within-region comparativists are interested in trying to see how the cultures in the region are related to each other (Jorgensen., 1974) (Note 6).

Holocultural analysis or worldwide cross-cultural analysis which developed out of the ancestry from Tylor to Sumner and Keller, and then to Murdock is another type of cross-cultural research. According to Levinson (1977:3) (Note 7) holocultural study "is usually designed to test or develop a proposition through the statistical analysis of data on a sample of ten or more non-literate societies from three or more geographical regions of the world". In this approach, cultural traits are taken out of the context of the whole culture and are compared with cultural traits in widely diverse cultures to determine patterns of regularities and differences within the broad base of the study. These approaches differ on the determination of what constitutes a unit of analysis.

Another type is coding which implies that data can be collected in two ways. First, data can be coded directly from ethnographic sources, or from ethnographic reports in the HRAF files. Second, is the usage of previously coded data from coded ethnographic sources or previous holocultural studies. Levinson and Malone suggest coding the dependent variables from HRAF files or ethnographic sources, and collecting independent variables from compendia of coded data.

Inferential studies are another type of cross-cultural research. These are used to answer important or challenging questions such as "*so what*?" or "What does it mean?"

The last is emic vs. etic models. Emic models view behaviour as culture-specific phenomenon which must be understood in the context of a particular culture while etic models view behaviour as universal phenomenon which must be understood in comparison to behaviour in other cultures. Thus, three approaches (or combinations thereof) are possible: Subjective single-culture, Objective single-culture and Objective cross-cultural.

8. Advantages and Disadvantages of Different Types of Comparison

Worldwide Cross-cultural comparison has two major advantages (Ember, 1991) (Note 8). First, the statistical conclusions drawn from a worldwide comparison of all type of society are probably applicable to the entire ethnographic record, assuming that the sample is more or less free of bias. That is to most if not all regions and all types of societies in the ethnographic record. Thus other thing being equal, the worldwide type of cross-cultural comparison has a better chance than other types of comparison of coming close to the goal of knowing that a finding or an observed relationship has nearly universal validity, which is consistent with the general scientific goal of more and more comprehensive explanation.

Next, worldwide cross-cultural research maximizes the amount or range of variation in the variable investigated thereby making a difference between a useful and a useless study. Without variation, it is impossible to see a relationship between variables. If for instance a researcher uses data from a single society; a single region, or even from the recent historical record for nation-states, there may be little or no variation to relate to other things. Even if there is some variation, it may be at just one end of the spectrum of variation. Hence, one may assume that a relationship is positive or negative, because that is all one observe in the region or in one type of society, but the relationship may be curvilinear in the world (Whiting, 1954:524-25). Hence, a worldwide cross-cultural comparison is needed to be sure about the nature or shape of a relationship. A worldwide cross-cultural sample represents the maximum range of variation in the ethnographic record. It is the most reliable way to discover exactly how variables are related in the entire range of human societies.

Besides these major advantages, a worldwide cross-cultural study might be unsuccessful and the researcher could get stuck. A researcher is unlikely to know much about individual societies when comparing a lot of societies from different parts of the world. If a tested explanation turns out to be supported, the lack of detailed knowledge about the sample cases is not much of a problem. If, however the cross-cultural test is disconfirming, it may be difficult to come up with an alternative explanation without knowing more about the particular cases. More familiarity with the cases may help in formulating a revised or new theory that could be tested and supported (Johnson, 1991)(Note 9).

9. Methodological Concepts in Cross Cultural Research

There are primarily two main methodological concepts in cross-cultural research. The first is that comparison is essential to anthropological research. Therefore to understand culture, societies must be compared. The comparative method is a search for comparable cultural patterns in multiple societies, particularly the comparison of cultural traits taken out of cultural context (Winthrop 1991: 43).

Secondly, all theories, despite fads or current trends require testing. Without comparison there is no way to evaluate if presumed cause and effect are related. This relates to the logical "if" ---"then" inductive process. If cause is not present then the effect should not be present (Levinson and Ember 1996:262). Cross-cultural analyses are used to describe the range and distribution of cultural variation existent in the ethnographies recorded as well as to test the hypotheses and theories that are proposed to explain the variation recorded (Levinson and Ember 1996: 261).

10. Methods of Observation in Cross Cultural Research and, Their Significance

Cross-cultural researchers usually employ standard principles of scientific method and research design-random sampling techniques which are supposed to be unbiased, reliable or repeatable measurements so that others can try to replicate their results and the researchers may determine how much confidence they can place in such results. These methods are case-study, survey, testing method, naturalistic-observation, laboratory-observation, correlational method, and experimental method

The case-study method is a carefully drawn biography that may be obtained through interviews, questionnaires, and psychological tests. The survey method is a method of scientific investigation in which a large sample of people is questioned about their attitudes or behaviour. There are three types of survey research design. These are direct surveys, indirect surveys and focus group method. With direct surveys Interviewer maintains or can maintain a direct communication with the respondent and is able to provide feedback, repeat a question, or ask for additional information. Through indirect surveys, researcher's personal impact is very small because there is no direct communication between the respondent and the interviewer. The questions are typically written and handed in, mailed, or sent electronically to the respondents' homes, classrooms, or work places. The focus group methodology is a survey method used in academic & marketing research. The most common usage is one where a group responds to specific social, political, or marketing messages.   The typical focus group contains 7 – 10 members who are experts, potential buyers, viewers or other customers.

The testing method entails the usage of psychological tests like intelligence, aptitude, and personality, to measure various traits and characteristics among a population by psychologists. Such testing instruments must be standardized, show face and concurrent validity, and reliability. They must have established norms as well.

The naturalistic-observation is a scientific method in which organisms are observed in their natural environments while the laboratory-observation is a method where a place is found in which theories, techniques, and methods are tested and demonstrated.

The correlational method is a scientific method that studies the relationships between cross-cultural variables. The Correlation coefficient is a number between +1.00 to -1.00 that expresses the strength and direction of the relationship between two variables. There are two major types of correlation**:** Positive correlation (which implies that increases in one variable are associated with increases in the other; decreases are likewise associated) and Negative correlation (which implies that increases in one variable are associated with decreases in the other) (*see Figure 3*).
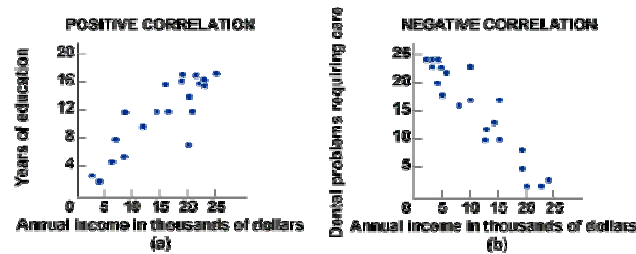
Figure 3.

The experimental method is used to hunt for causes of cultural variations in societies. The experimental variables consist of the independent variable which is a variable that an experimenter manipulates and the dependent variable which is a variable that an experimenter predicts will be affected by manipulations of the independent variable (*see Figure 4*). The experimental design has three elements: Treatment, Experimental subject and Control subjects. The treatment refers to a condition (which may be placebo, blind or doubleblind) received by participants so that its effects may be observed. Experimental subjects receive the treatment and the Control subjects do not receive the treatment but for whom all other conditions are comparable to those of experimental subjects.
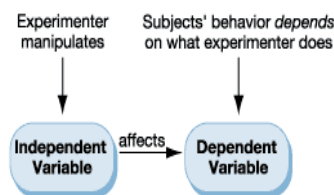

Figure 4.

All cross-cultural research methods may be employed in either Cross-Sectional Study or Longitudinal Study. Cross-sectional study is used to compare subjects of different ages at a given time but in longitudinal Study subjects are followed and periodically reassessed over a long period of time (*see Figure 5*).
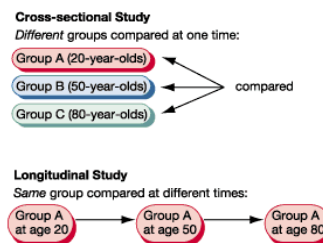

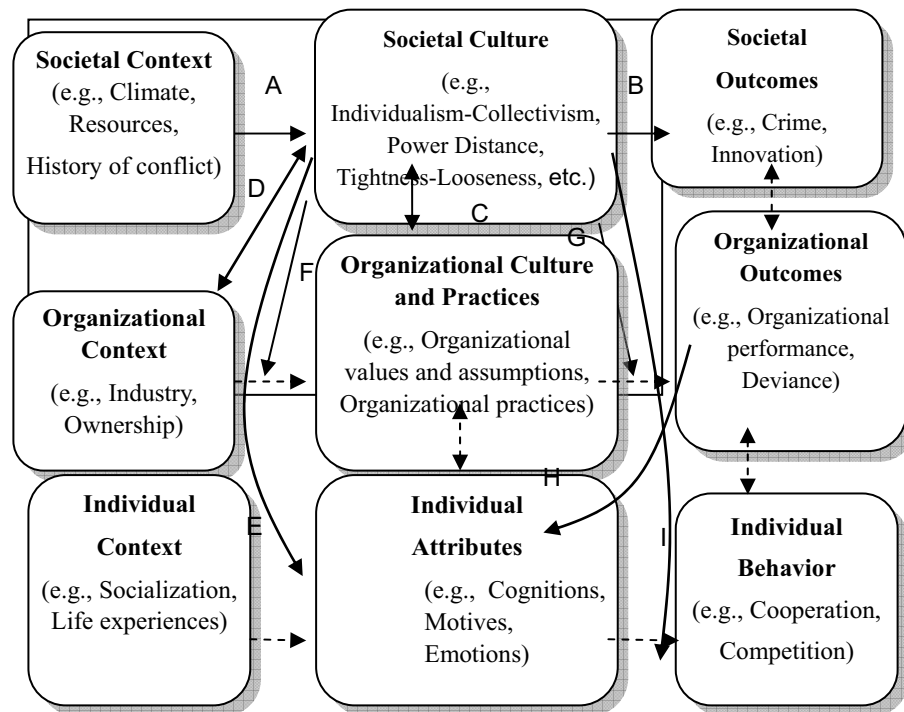Figure 5.

11. Features of Cross-cultural Research

Figure 6. A typology of cross-cultural research questions

Essential features of cross-cultural research are question, sampling, theories and hypotheses, operational definition, and principle of falsifiability. The research question has to be a clear, one sentence practical question which can be answered in a reasonable time frame (Figure 7 below presents a typology of cross-cultural research questions)

Cross-cultural (worldwide comparative) researchers usually ask four kinds of questions. These are descriptive question, causal question, consequence question and non-directional relational question. Descriptive question usually deals with the prevalence or frequency of a trait. Examples are: *how common is the belief that sex is dangerous to one's health? How common is it for a society to allow polygyny? Are peaceful societies common? Is the custom of marriage universal? What percentage of the world's societies practice polygyny? Which is the most important subsistence activity among food collectors — gathering, hunting, or fishing? How common is female infanticide?*

Causal question seeks answers about the causes of a trait or custom. Examples of causal questions are: *Why is polygyny permitted in most societies known to anthropology? Why do women (as opposed to men) do most of the agricultural work in some societies? Why is the extended family the customary form of household in many societies?*

Consequence question asks about effects of the consequences or effects of a particular trait or custom. Examples of consequence questions are: *What are the effects on infant care of high involvement of women in subsistence activities? Does punitive child training affect the frequency of warfare?*

Non-directional relational question asks whether two traits are related or not, without implying cause or consequence. Rather than postulating causes or consequences, a researcher may simply ask how a particular aspect of culture may be associated with some other aspect(s). For example: *Is there an association between most important subsistence activity and level of political complexity?*

Causal question and Non-directional question are relational questions that ask how traits are related to other traits. Of the four types of questions, the causal of 'why' question is the most challenging because it rarely specify what the researcher needs to do to answer the question. The descriptive question tells the researcher what to count. The consequence question can also be unspecific or open ended; the possible outcomes may not be specified in advance.

Figure 7: Types of Relational Questions

Causal Question:

Independent variable   dependent variable

??? ———————————————————————————▶ **X**

Consequences Questions:

Independent variable   dependent variable

X ———————————————————————————▶ **???**

Independent variable   dependent variable

X ———————————————————————————▶ Y

Non-Directional Relational Question:

variable1   variable2

X ◀———————————————————————————▶ **Y**

The "consequence" and "relational" questions usually specify two sets of concrete phenomena that may be related to look at. If you want to know whether type of marriage has an effect on or is related to fertility, then there is the need to measure both variables (types of marriage and fertility). But the causal question does not tell the researcher where to look for causes. It only specifies what scientists call the *dependent* variable (the thing to be explained).

With regards to sampling, cross-cultural researchers must decide what societies to examine because no one can examine all cultures. The most important operating principles in a scientific test of hypothesis are: 1) to choose a sample that is representative of some universe of societies the researcher wants to generalize the results to; and 2) to use a large enough sample such that the results are likely to be true for the larger universe of cases.

Theories and Hypotheses are ideas (implicit or explicit about how and why things are the way they are) underlying descriptive, consequences, causal or non-directional relational questions. Spelling out the assumptions and reasons for a researcher's expectations can clarify his theorizing and also help derive hypotheses that could be tested. Theories are assumption of laws and statistical associations which do result in predictions called hypotheses. For instance:

Assumption 1: Males will be more aggressive than females

Assumption 2: Individuals with higher levels of androgen will be more aggressive.

Cross-cultural analysts test hypotheses and draw statistical correlations based on the assumption of the existence of universal patterns (Naroll 1961, 221).

Operational definition is a precise definition of a term in a hypothesis, which specifies the operations for observing and measuring the process or phenomenon being measured. The principle of falsifiability assumes that a scientific theory must make predictions that are specific enough to expose the theory to the possibility of disconfirmation; that is, the theory must predict not only what will happen, but also what will not happen.

Other features include participants, replication (The ability to repeat, reproduce or copy a study), selection factor (The bias source that may occur when subjects are allowed to determine for themselves whether or not they will receive a treatment condition in a scientific study), and measures for each variable in the hypothesis. Devising a measure involves at least four steps; 1) theoretically defining the variable of interest (in words or mathematically); 2) operationally defining the variable, which means spelling out the "scale" that the researcher has devised for measuring it; 3) telling the coder where to find the required information and 4) pre-testing the measure to see if it can be applied generally to

most cases. Designing a measure requires some trial-and-error. If the scale is too confusing or too hard to apply (because the required information is lacking), the measure needs to be rethought. For instance, the degree to which a society has extended family households needs to be defined. The researcher needs to state what an extended family means, what a household means, and how he will decide the "degree" to which a sample society has extended family households. Having defined the concepts, the researcher must specify how to measure the degree to which a society has extended family households.

Next is analysis of results which is used to determine if the predicted relationship actually exists in the data. It is precisely here that cross-cultural researchers usually resort to statistical tests of significance. There are several Statistical tests that show how "perfect" a result has to be for us to believe that there is probably an association between the variables of interest, that one variable generally predicts the other. Essentially, every statistical result is evaluated in the same objective way. The question is asked: *What is the chance that this result is purely accidental, that there is really no association at all between the two variables.* The answer always involves a probability value (or *p-value*), the likelihood that the observed result or a stronger one could have occurred by chance. So, if a result has a *p-value of less than .01*, this indicates that there is less than one chance in one hundred that the relationship observed is purely accidental. A *p-value of less than .01* is a fairly low probability; most social scientists conventionally agree to call any result with a *p-value of .05 or less* (five or fewer chances in one hundred) a *statistically significant* or probably true result.

12. Changing Face of Cross-cultural Research

This focuses on the recent advances in cross-cultural research. The first of which is Kurt Lewin's new conceptual and methodological strategy for cross-cultural research based on field theory. This has been applied to several recent research projects and has shown to be capable of explaining seemingly paradoxical findings. It focuses on issues such as: (a) the place of objective, social, and subjective realities in such research; (b) the importance of considering the relationship between these realities; (c) the role of an interdisciplinary perspective; and (d) the appropriateness of traditional research methods.

Next are the current developments in the collection of survey data via the internet, including both the methodological strengths and weaknesses of this approach, as well as current standards for best practice. A range of benefits are claimed for online research: lower costs; faster turnaround; higher response rates; lower refusal rates; lower respondent error; broader stimuli potential; flexibility in the form of adaptive questioning; and even greater enjoyment (Smee, Brennan, Hoek and Macpherson 1998; Forrest 1999; and Kehoe & Pitkow 1996). The methods often used involve *email surveys*, *postal invitations to visit a website and complete a web form*, and *email invitations to complete an online survey or web form*.

Three dimensions already suggested as appropriate for analyzing data collection methods are *validity*, *reliability* and *practicality* (Weible and Wallace 1998). 'Practicality' is seen as 'efficiency' and "concerns the complexity of the data collection process, and includes cost, ease of administration, and the ease of analyzing and interpreting data" (Weible and Wallace 1998). A review of the academic literature illustrates that analyses of the practicality of using online data collection methods have mainly involved non-probability samples and that there are a number of issues which are significant from the viewpoint of maintaining data integrity while trying to gain greater efficiency. These issues are particularly significant in the area of cross-cultural research.

With electronic surveys, there are a number of technical issues to be overcome. The first of which has to do with sampling. Sampling is perhaps one of the greatest threats to online surveys. This may be tied to the impact of individual's response to electronic equivalent of junk mail and therefore on sampling error. It is instructive to note that SPAM is technically the use of a Newsgroup or mailing list to send unwanted email. An issue is where the respondent's email address came from as far as the authors are concerned. However, from trials to date using email addresses of information technologists and judging their responses, many define SPAM as simply any email received from anyone they do not know. It is felt that the same situation may hold true for 'cookies' and their intrusive use. This is turn may bias the sample and also account for slowing response rates and increasing refusal rates

Another issue which undoubtedly impacts on the representativeness of online samples is the matter of bad email addresses. Comley (1996) reported a study comparing data collection using email (1,221 sample), post (1,769) and a postal invitation to complete a web based form (1,000) that bad email addresses were high at 35%. While immediate notification of bad email addresses is an example of the flexibility of online data collection methods there are significant issues involved. The sample in the Comley (1996) came from a less than one year-old database of UK Internet users who read an online magazine. This suggests that email addresses may change more often than might otherwise be suspected. Another issue concerns whether or not the receiving mail server is barring the mail because it is regarded as SPAM. Comely (1996) also illustrates that while it is difficult to measure response quality, the dimensions *item omission, response error* and *completeness of answer* are guides.

It is suggested that care is needed in ensuring that input translates into output fields as intended and in particular, care is needed with the number and type of characters permitted in open-ended questions using textboxes in web based forms. For example, an unwanted RETURN character in a textbox may signal to SPSS or another software package that a new response starts at this point. There are other technical issues such as high screen resolution dependency, Java script, 'cookies' and adaptive questioning when browser technology and computer hardware and firmware is not yet uniform enough to permit such technological enhancements and assumptions. The issue of duplicate responses can arise in many online consumer or end-user surveys. To avoid this, researchers need to input a unique server-generated password for each respondent. This approach will avoid over-sampling in that only a single response is accepted to the Oracle database for each respondent, thus also overcoming another issue: that of pressing the SUBMIT button more than once.

13. Problems Encountered in Cross Cultural Research

Although cross-cultural psychology has advanced our understanding of cultural aspects of psychology, it is marred by theoretical and methodological flaws. These flaws include misunderstanding cultural issues and the manner in which they bear on psychology; obscuring the relation between biology, culture, and psychology; inadequately defining and measuring cultural factors and psychological phenomena; erroneously analyzing data and drawing faulty conclusions about the cultural character of psychology.

Another problem involves difficulties in obtaining a representative sample**.** Factors influencing representative samples are subject availability, willingness to participate, geographic isolation, and unavailability.

A third problem has to do with measurement which may lead to imposed etic (Berry, 1969) which is the imposition of the behavioral definition and measurement techniques of the researcher's home culture on the subjects in the research field. For instance, there are differences between African and Western model of thought. The Western thought may not transfer easily to another culture thereby leading to an imposed etic (Berry, 1969). Hence, this fundamental thinking difference and cultural belief system has important effects on ethnographic research methodologies and results. When employing Western methods, it cannot be assumed that the Africans will respond the same way as Western respondents do.

Another serious issue is equivalence (bias). In behavioral definition and research instruments (Lonner, 1979) equivalence (bias) has to do with the similarity in conceptual meaning and empirical method between cultures. If any of these aspects are not equivalent across cultures then comparison is not valid. There are functional equivalence (whether behavioral phenomenon serves the same purpose or intent), conceptual equivalence (meanings associated with similar stimulus across different cultures), metric equivalence **(**assumes numeric scales measure a concept equally) (Problem e.g., I.Q.) and linguistic/translation equivalence (which entails researchers understanding of subject's response and respondents their understanding of researcher's questions, culturally idiographic terms– words or terms unique to the culture and culturally isomorphic terms– words or terms in both cultures with different meanings E.g., out-of-sight, out-of-mind; view/intellect).

Possible solutions to problems raised above will require the use of back translation and an emic approach when conducting cross-cultural research. Back translation implies the use of translators capable of communicating in both languages fluently as well as interpreting conceptual, cultural differences and domain knowledge. An often overlooked factor in cross-cultural research is the assumption that hiring local translators shuttling information between two different cultures will yield the same research results. It is important to note that domain and cultural knowledge of the translator and his/her understanding of the relevance of the research results applied to design are critical for accurately interpreting conceptual differences. Purely translating between languages word for word will guarantee mis-representation of information as well as skew research findings. An example of this is shown on figure 8 below where the phrase *"Designed for Use"* in English is translated to *"Easy to Use Design"* in Chinese*.*

Figure 8. Language Translation versus Conceptual Translation

Cross-cultural researchers need to use an etic-emic approach with observation and collaboration from members of the other group in assessing their constructs of interest. This will demand researchers starting from a particular cultural perspective (etic), gathering emic information from other countries (e.g., interviews, focus groups), incorporating this information and deriving a new etic so that the final construct is appropriate and representative of all cultures.

14. Ethical Issues in Cross Cultural Research

Ethical Issues in cross-cultural research involve issues such as values and worldviews, definitions, research design, informed consent, entry into the field, confidentiality, approaches to data collection, participant roles, ownership of data, writing, representation, and dissemination of results.

With respect to values and worldview, Hudson & Taylor Henley, (2001); Sue & Sue, (1990) noted that marginalized and minority participants frequently report feeling misunderstood by researchers from mainstream (Euro-American) culture. Rapport building can be used by the researcher to foster relationships with minority participants (Stubben, 2001; LaFromboise, 1993; Westwood & Ishiyama, 1990). A key to understanding and conducting research with participants from cultural minorities is the utilization of a systems approach (Sue & Sue, 1990). For example, Aboriginal families tend to include extended family members, place importance on collective identity and strong tribal affiliations (Thomason, 1999). Pedersen (1991) suggests that no two families, or groups, are ever culturally the same; each family internalizes aspects of the cultural norms of the group in its own way. Factors such as acculturation, class, education, and ethnic identity underpin such within and between group differences (Axelson, 1990). Religion and spirituality are often extremely important factors in the lives of ethnic minority clients, and can provide a valuable source of social connection and self-esteem in times of stress or crisis (Malone, 2000).

Kerwin and Ponterotto (1995) describe "bicultural families," in which the parents come from two different cultures (often one from the dominant culture and one from a minority culture). Healthy identity development for young people from these bicultural families involves integrating both cultural backgrounds into one self-concept that is unique (Diller, 1999). For example, today's North American Asian and Aboriginal youth often possess a bicultural identify in which they identify with both traditional beliefs and self-awareness as well as contemporary or more European-North American values; this bicultural sense of self is usually linked to level of acculturation (Herring, 1999; Wetsit, 1999; Ho, 1994).

External factors such as racism and prejudice, economic status, and level of acculturation (Diller, 1999) are often interrelated in psychosocial development in a culturally pluralistic society (Koss-Chioino & Vargas, 1992). For example, traditional Native youth are raised within the context of the extended family (grandparents, aunts, uncles, cousins, etc.), all of whom hold responsibility for the socialization process (Herring, 1989; Wetsit, 1999). Therefore, understanding the culture's concept of family is a necessity for effective cross-cultural interactions, including the research relationship (Koss-Chioino & Vargas, 1992). Developmental tasks can also be impeded by language barriers, poverty, and stereotypes, which limit both perceived and real access to available resources (Rivers & Morrow, 1995).

Herring (1999) and Atkinson, Morten & Sue (1993) also suggest that socioeconomic concerns, societal discrimination and poverty are some of the issues faced by many people from ethic/cultural minorities. The impact of underemployed and unemployed parents on marginalized youth is tremendous; it has been suggested that the most immediate effect of poverty is restricted access to environmental resources with which to improve lack of health care services and education, substandard housing, and inadequate nutrition (Rivers & Morrow, 1995).

These above factors related to cultural context and social environmental issues are salient issues in psychosocial development, and can significantly impact the mastery of key developmental tasks in childhood and adolescence (Pedersen, 1991). Research investigations must, therefore, be based on an understanding of diverse cultural dynamics and their necessary impact on psychosocial development.

Research design is another ethical issue in cross-cultural study. It focuses on the incongruence which may exist between researchers' views or theoretical frameworks and those of the group or culture in any research project. Where differences exist between researcher and participant, they must be respected, and care must be exercised to not project one's own values onto the research process, nor judge a participant's behaviour that varies from one's own culturally sanctioned standards (Lee, 1995). For example, mental health professionals and researchers have tended to adopt Western European, largely male cultural definitions of what constitutes healthy and normal functioning (Thomason, 1999). Self-reliance, self-actualization, assertiveness, autonomy, in sight, and resistance to stress are seen as some of the tenets of healthy mental functioning (Sue & Sue, 1990). These are the goals toward which clients are often encouraged to strive; these qualities are not, however, valued equally in all cultures. For example, effective healing for First Nations means working on interconnectedness rather than autonomy, which is often the goal for individual focused therapy (Appleton & Dykeman, 1996). Therefore when considering research procedures or instruments across cultures, it is important to take varied meanings into account (Peavy, 1998).

Educational attainment and achievement is another area that is greatly impacted by cultural definitions and expectations for success in life and work. For instance, some collectively oriented cultures view individual educational and vocational achievement as important only when it positively impacts the group, in contrast to a typical Euro-North American emphasis on individual growth and goal attainment (Atkinson, Morten, & Sue, 1993). When working with participants in a cross-cultural situation, researchers must be aware of differences related to local norms, mainstream culture knowledge, language proficiency skills, educational opportunities, and culturally appropriate role models (Daily, 1988; LaFromboise, 1993; Martin & Farris, 1994). Additionally, minority and marginalized groups face limited access to educational and employment opportunities (Diller, 1999). Research interpretation and recommendations can thus be impacted by factors such access to educational and employment opportunities, or socioeconomic status (Herring, 1999).

In terms of informed consent, cross cultural research and interaction requires a special definition (Piquemal, 2001). In some cultures, ethics is a more fluid concept that requires constant reexamination and redefinition; therefore informed consent must be viewed and implemented as an on-going process. That is consent must be asked for and given at almost every step of the research process to assure that it is valid and that the participants remain fully informed and cognizant of each aspect of the research proceedings. The standard letter of consent that participants read and sign is only one part of this process, and indeed, can act as a barrier to truly informed participation unless fully explained in understandable language.

The source of consent for many marginalized groups also requires special consideration and so must be more clearly and operationally defined. This must be done on a case-by-case basis because each ethnic/cultural community or group has a strong and self-created identity that is each unique and different from other cultures' notions of self-identity. Identity, as community research itself, must be viewed through a process of interpretation which focuses more on the importance of the relationship and experience itself rather than its content (Piquemal, 2001).

Entry into the field in research across cultures requires researchers to proceed in culturally sensitive ways. Respect and continuous communication are two essential elements in this process (Mtonga, 1986). Asking, rather than telling, and an on-going consultation with knowledgeable key informants in the community will help to build mutually beneficial research partnerships.

Community control involves the participation of community members to define and flesh out their social realities, and to decide who and what is researched in their communities. This type of participation, in the context of a research project, serves to increase a group's autonomy through the process of praxis (Hudson & Taylor-Henley, 2001). The notion of control demands that research processes empower the community by respecting cultural values and belief systems, which traces back to a basis of ensuring informed consent. Integral to a community's control over research is authority over a project's agenda (its purpose and methodology), budget, and participant selection (Hart, 1995). For example, in a cross-cultural context, the host community and not the researchers must themselves select consultants throughout the research process, demonstrating a clear link between concepts of informed consent and control in the research design and implementation. However, Hudson and Taylor-Henley (2001) caution that control is something that must be measured by degrees and that it is unrealistic to believe that a community can have complete control over a research project implemented by outsiders. Instead, the relationship should be viewed as a partnership agreement, but with major decisions ultimately made by the community. A closer look at the theme of control suggests that if there is social or political dissent or problems within a group or community, deciding which members should be legitimate spokespersons or co-researchers might be difficult. Kerr (2002) states that adherence to research procedures such as random assignment and unbiased participant selection within the community can be one way to deal with such issues.

On the area of approaches to data collection, issues such as community damage and inaccurate findings have been identified as major concerns with ethic/racial minority participants (Ponterotto & Casas, 1991). Culturally appropriate research affords a method that allows socially legitimate collective knowledge to be used as part of the methodological framework of the research (Brandt-Castellano, 1986). To Parlee (1983), "Psychological knowledge would be dramatically changed if it were consistently developed through interaction with its 'subjects' and its intended audiences instead of being developed with professional colleagues in mind and 'given away'" (p. 1).

Participants' role in cross-cultural research is expected to be participatory. Participatory action research (PAR) (Sommer, 1999; Hoare, Levy, and Robinson (1993) is an approach that relies on community member participation to examine social reality and the creation of local skill capacity for the express purpose of creating community autonomy through the process of praxis. PAR is mostly advocated as an effective research methodology for working with marginalized populations, including the poor, women, and immigrant (Choney, Berryhill-Paapke, & Robbins, 1995). It is value-driven instead of value-neutral, and has several related objectives: to improve the lives of the participants; to advance knowledge; and to improve the practice of AR through a critical examination of the collaborative process (Hart, 1995).

With writing, representation, and dissemination of results, Herring (1999) noted that some cultural groups have been made suspicious of outside research because of historical exploitation that did not accurately express their cultural

experience and did not benefit the community in any way. Several reasons for community damage from research/ psychological practice have been identified. One is that much research is done from a dominant culture perspective that is either derogatory or a romanticization of marginalized identity and life-style (Weenie, 2000). In addition, researchers have tended to generalize a specific culture when concentrating on specific cultural problems (Smith & Morrissett, 2001). Also, generalized research results or "truths" are often culturally inaccurate (Smith & Morrisette, 2001). Researchers need to work with community members to help ensure appropriate and representative portrayals in their dissemination.

Another issue is community ethics which deals with concerns about power centre around who makes decisions about research processes, methodology, data collection and analysis. In a research relationship, community ethics is a concept that means that a collaborative and agreed-upon decision-making process exists that enables communities to hold the power the research (Hart, 1995). However, in terms of research ethics, the community may not always have the information or knowledge to make sound ethical decisions which the academic researcher is, at least, ethically bound to consider. For instance, in a community-based research project, the co-researchers from a community may formulate questions for a survey that the academic research questioned ethically, but the researcher may respect the community-researchers' power in the process.

15. Implications of Ethical Issues on Current Priorities and Future Directions in Cross-Cultural Relationship

Understanding the impact that cultural influences have on basic values, priorities, beliefs, and behaviours is of critical importance. Academic researchers must recognize the likelihood for differences in perceptions when working with participants from diverse cultural backgrounds. Respect and acknowledgement of community values, differing worldviews, and ethical practice are salient issues for cross-cultural researchers. Taking the necessary time to get to know and understand community workings is critical also. Researchers must recognize that almost all marginalized and minority groups have shared certain undesirable experiences in common such as prejudice and stereotyping, socioeconomic and career disadvantages; and struggling to maintain their own ethnic identity while adapting to life in the dominant culture. Collaboration and consensus, communication, and negotiating partnerships are necessary considerations for researchers entering cross-cultural situations. Participatory Action Research (PAR) methods are particularly appropriate in these contexts.

16. Conclusion

A culture comprises an amalgam of shared values, meaning and interpretations of behaviors. This cannot be adequately understood simply by studying samples of individuals. Researchers need to develop a conceptual framework that will enable them to classify how samples differ. However, that framework must be constructed on the basis of concepts that are not simply derived from one culture and imposed on others. Thus researchers' culture-level concepts must arise from parallel individual-level analyses. Once there is a valid culture-level concept, researchers can use it to interpret differences in culture-level phenomena. However, if researchers wish to interpret individual-level differences within two or more cultures, then they need to draw on measures of cultural orientation that are also available from the individuals whom they are studying. In this way studies can be made which can test for universal effects and also explain why those effects are sometimes reduced or even reversed in some locations.

References

Argyris, C., Putnam, R. & Smith, D. M. (1985). *Action science.* San Francisco, CA: Jossey-Bass

Atkinson, D. R., Morten, G., & Sue, D. W. (1993). *Counselling American minorities: A cross-cultural Perspective*, 4th ed. (pp. 123-144). Madison, Wisconsin: Brown & Benchmark.

Berry, J. W. (1969). On cross-cultural comparability. *International Journal of Psychology*, 4, 119-128.

Brandt-Castellano, M. (1986). Collective wisdom: Participatory research and Canada's Native people. *The IDRC reports,* 15, 3, 24–25.

Burton, Michael L. & White, Douglas R. (1991). Regional Comparisons, Replications, and Historical Network Analysis. Cross-Cultural Research, Vol. 25, No. 1-4, 55-78. DOI: 10.1177/106939719102500104

Choney, S. K., Berryhill-Paapke, E., & Robbins, R. R. (1995). The acculturation of American Indians: Developing frameworks for research and practice. In J. G. Ponterotto, J. M. Cass, L.A. Suzuki, and C.M. Alexanders (Eds.), *Handbook of multicultural counselling* (pp 73–92). Thousand Oaks, CA:Sage.

Comley, P. (1996), "The Use of the Internet as a Data Collection Method," *SGA MarketResearch*, [Online] Available: http://www.sga.co.uk/esomar.html

Daily, B. (1988). The roots of the problems in Native communities. In T. Martens, B. Daily, M. Hodgson & the Nechi Institute (Eds.), The spirit weeps: Characteristics and dynamics of incest and child sexual abuse (p. 107–122). Edmonton, AL: Nechi Institute.

Diller, J. V. (1999). *Cultural diversity: A primer for the human services*. Belmont, CA: Wadsworth Publishing Company.

Driver, Harold E. (1956). An Integration of Functional, Evolutionary and Historical Theory by Means of Correlations. *Indiana University Publications in Anthropological Linguistics, Memoir* 12.

Ember, Carol R. (1988). Guide to Cross-cultural Research Using the HRAF. New Haven: HRAF Press.

Ember, Carol R. (1990)**.** Bibliography of Cross-Cultural Research Methods. Cross-Cultural Research, Vol. 24, No. 1-4, 141-154 DOI: 10.1177/106939719002400107

Ember, Carol R. (1992). With the assistance of Hugh Page, Jr., Timothy O'Leary, and M. Marlene Martin. Computerized Concordance of Cross-Cultural Samples. New Haven: Human Relations Area Files.

Ember, Carol R., and Melvin Ember. (1998). Cross-Cultural Research. In Handbook of Methodology in Cultural Anthropology, ed. H. Russell Bernard, 647–687. Walnut Creek, CA: Altamira Press

Harris, Marvin. (1968). The Rise of Anthropological Theory: A History of Theories of Culture. New York: Crowell.

Hart, S. (1995). Action in reflection. *Educational Action Research*, 3, 211-232.

Herring, R. (1999). *Counselling Native American Indians and Alaska Natives*. Thousand Oaks, CA: Sage.

Ho, D. R. (1994). Asian American perspective. In J. U. Gordon (Ed*), Managing multiculturalism in substance abuse services* (pp. 72–98). Thousand Oaks, CA: Sage.

Honadle, B. W. (1996). Participatory research for public issues education. *Journal of the Community Development Society,* 27, 56–77.

Hudson, P., & Taylor-Henley, S. (2001). Beyond the rhetoric: Implementing culturally appropriate research projects in First Nations communities. *American Indian Culture and Research Journal,* 25, 93–105.

Koss-Chioino, J. D., & Vargas, L. A. (1992). Through the cultural lookingglass: A model for understanding culturally responsive psychotherapies. In L. A. Vargas & J. D. Koss-Chioino (Eds.), *Working with culture: Psychotherapeutic interventions with ethnic minority children and adolescents* (pp. 1–22). San Francisco, CA: Jossey-Bass.

LaFromboise, T.D. (1993). American Indian mental health policy. In D. R. Atkinson, G. Morten, & D. W. Sue (Eds.), *Counselling American minorities:A cross-cultural perspective*. (4th ed.). (p. 123–144). Madison, WI: Brown & Benchmark

Lagacé, Robert O. (1979). The HRAF Probability Sample: Retrospect and Prospect. *Behavior Science Research* 14: 211–229

Lee, C. C. (Ed.). (1995). *Counselling for diversity*. Needham Heights, MA: Allyn and Bacon.

Levinson, David and Melvin Ember, editors. (1996). *Comparative Method. In Encyclopedia of Cultural Anthropology*. 1: New York: Henry Holt.

Malone, J. L. (2000). Working with Aboriginal Women: Applying Feminis Therapy in a Multicultural Counselling Context. *Canadian Journal of Counselling,* 34, 33–42.

Martin, W. E., & Farris, K. K. (1994). A cultural and contextual decision path to career assessment with Native Americans: A psychological perspective. *Journal of Career Assessment,* 2, 258–275.

Murdock, George P. (1967). *Ethnographic Atlas*. University of Pittsburgh Press. Also Ethnology 6:109-236.

Murdock, George P. (1981). *Atlas of World Cultures*. Pittsburgh: University of Pittsburgh Press.

Murdock, George Peter, and Douglas R. White. (1969). Standard Cross-Cultural Sample. Ethnology 9: 329–369. [Online] Available: http://repositories.cdlib.org/imbs/socdyn/wp/Standard_Cross-Cultural_Sample

Murdock, George Peter. (1968). World Sampling Provinces. *Ethnology*, 7: 305–326.

Murdock, George Peter. (1980). *Theories of Illness: A World Survey*. Pittsburgh, PA: University of Pittsburgh Press.

Naroll, Raoul. (1961). *Two Solutions to Galton's Problem. In Readings in Cross-Cultural Methodology*, edited by Frank Moore, pp.221-245. New Haven: HRAF Press.

Naroll, Raoul. (1967). The Proposed HRAF Probability Sample. *Behavior Science Notes*, 2: 70–80.

Parlee, M. B. (1983). President's letter. *Division 35 (APA) Newsletter*, 1–10.

Peavy, V. (1998*). Socio-dynamic counselling: A constructivist perspective*. Victoria: Trafford Publishing.

Pedersen, P. B. (1991). Multiculturalism as a generic approach to counselling. *Journal of Counselling and Development,* 70, 6–12.

Piquemal, N. (2001). Free and Informed Consent in Research Involving Native American Communities. *American Indian Culture and Research Journal,* 25, 65–79.

Ponterotto, J. G., & Casas J. M. (1993). *Handbook of ethnic/racial minority counseling research*. Springfield, IL: Charles C. Thomas.

Seymour-Smith, Charlotte. (1968). Macmillan Dictionary of Anthropology. London: Macmillan.

Smee, A. Brennan, M. Hoek, J. And Macpherson, T. (1998). "A Test of Procedures for Collecting Survey Data Using Electronic Mail," Refereed WIP paper, *Australian and NewZealand Marketing Academy (ANZMAC) Conference Proceedings*, 30 Nov - 2 December, University of Otago, Dunedin, New Zealand, pp.2447-2452.

Smith, D. B., & Morrissette, P. J. (2001). The experiences of white male counselors who work with Aboriginals clients. *Canadian Journal of Counselling,* 35, 74–88.

Sommer, R. (1999). Action research: From mental hospital reform in Saskatchewan to community building in California**.** *Canadian Psychology,* 40, 47–55.

Stubben, J. (2001). Working with and conduction research among American Indian Families. *American Behavioural Scientist*, 44, 1466–1480.

Sue, D.W. & Sue, D. (1990). *Counselling the Culturally Different*. New York: John Wiley & Sons.

Thomason, T.C. (1999). *Psychological and vocational assessment of Native Americans*. ERIC Document ED432428. Greensboro, NC: ERIC Clearinghouse on Counseling and Student Services.

Tylor, Edward Burnett. (1889). On a Method of Investigating the Development of Institutions; Applies to Laws of Marriage and Descent. *Journal of the Anthropological Institute,*18:245-272.

Weenie, A. (2000). Post colonial recovering and healing. In *Learn in beauty: Indigenous education in a new century.* [Online] Available: http://jan.ucc.nau.edu/-jar/LIB/LIB6. html

Weible, R. and Wallace, J. (1998). Cyber Research: The Impact of the Internet on Data Collection. *Market Research*, Fall, 10(3), pp.19-2.

Westwood, M. J., & Ishiyama, F. (1990). The communication process as a critical intervention for client change in cross-cultural counselling. *Journal of Multicultural Counseling and Development,* 18, 163–171.

Wetsit, D. (1999). Effective counseling with American Indian students. In *Next steps: Research and practice to advance Indian education.* Information Analysis. Monterey, CA: Brooks/Cole.

Whiting, John W. M. (1954). "The Cross-Cultural Method." In Handbook of Social Psychology, Vol. 1. Gardner Lindzey, ed. Cambridge, Mass.: Addison-Wesley, pp. 523-31. Reprinted in Readings in Cross-Cultural Methodology. Frank W. Moore, ed. New Haven: HRAF Press, pp. 287-300.

Whyte, W. F. (Ed.). (1991). *Participatory action research.* Newbury Park, CA: Sage.

Winthrop, Robert H. (1991). *Dictionary of Concepts in Cultural Anthropology*. New York: Greenwood Press.

Notes

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Analysis of Impact of Culture Shock on Individual Psychology

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Abstract

In recent years, international communication has become a common phenomenon because of the trend of globalization. This makes culture shock start to be experienced by more people and causes growing concern. This project takes the negative effects of culture shock into account and pays attention to how to minimize psychological discomfort when entering new cultural patterns. First of all, the main reason and the negative impact of culture shock are given. Next, it describes a number of solutions and evaluates the effectiveness of them. Finally, this paper justifies the preferred choice of solution, and then noticeable points are emphasized. Considering that character and disposition may be various among different people, it is found that in order to attain satisfactory results, choosing appropriate methods and reducing psychological stress to the controllable level are very important. This may be helpful for people who are experiencing culture shock to keep a healthy psychology.

Keywords: Psychology, Culture shock, International communications

1. Introduction

In recent decades, the peoples of the world have been brought closer and closer by fast technological development in transportation and communication. Today, the rapid globalization of world economies is making the need for understanding cultural diversity become more and more inevitable. Under this circumstance, cross-cultural communication is becoming a global issue. As a result, individual ability to adjust to a new culture is being paid increased attention (Ferraro, 2006). During the process of cultural adjustment, difficulties and problems in communication are usually caused by a change of emotion from cheerful and relaxed to sad and depressed. This is a common phenomenon for those people who face an unfamiliar culture (Hess, 1994). The term culture shock was introduced by an anthropologist Kalervo Oberg to describe this situation. According to Oberg, culture shock may be defined as the psychological disorientation experienced by people who suddenly enter radically different cultural environments to live and work (Eschbach et al, 2001). So as a kind of emotional responding to stress, culture shock has a close relationship to individual psychology.

The purpose of this project is to describe the impact of culture shock on individual psychology and give specific solutions. First it will introduce the main reason for culture shock. Then the negative impact of culture shock on individual psychology will be given. Next, it will give corresponding solutions from two stages: pre-departure and during the experience. The first stage will emphasize how to make preparations for culture shock before going abroad, and the second stage will put stress on how to overcome psychological stress when people experience culture shock. Finally, it will evaluate the effectiveness of each solution. Through this project, the nature of culture shock will unfold, especially from the psychological angle. Since it is possible that psychological adaptation can influence success or failure of overseas living, as Ferraro (2006) claims, analysing culture shock from the psychological aspect may help people understand culture shock fully and increase the probability of successful overseas living.

1. Culture Shock

1.1 Reason for culture shock

First of all, in order to decrease the negative impact of culture shock on individual psychology, it is necessary for people to find out its origins. It seems that culture is a vague concept, which includes extensive content such as sight, smell, sound, value, tradition, custom, behaviour and the way of thinking. All these elements may be different from one country to another. Therefore when people are away from home and enter a new environment, they have to come into contact with many new values, new practices and ways of living. This is especially true for those people who face a new cultural pattern which is different from their own ones. Take the differences between high-context and low-context cultures as an example. In the latter, such as the United States and Britain, more attention is paid to the content of talk,

and people often feel a strong need to explain their opinions in detail. Verbal language plays the most important role in communication, while nonverbal language such as body language and facial expression are secondary. However, high-context cultures are opposite. In most areas of Latin America, Asia, the Middle East and Africa, people usually focus less on what is being said, and nonverbal cues are significant methods of communication (Mitchell, 2000).

It appears that all people may experience culture shock when they encounter other circumstances which are dissimilar to their former cultural contexts. For expatriates, this change or unfamiliarity makes them fail to understand the ideology and behaviour of local people so that they do not know why those people behave as they do and how they themselves should behave. When these people lose all familiar signs and symbols of social intercourse, they have to try to adapt themselves to different lifestyles, living conditions and business practices in a new cultural setting. However, this is a long term and difficult process. In this condition, feelings of alienation accumulate sharply because of poor adaptation. Consequentially, culture shock occurs, followed by a series of psychological confusion and emotional discomfort (Hess, 1994).

1.2 Negative impact of culture shock

Change may cause stress. When people encounter a new culture and experience culture shock, change and unfamiliarity influences their own psychological adjustment and participation in a cultural environment. This psychological confusion and emotional discomfort usually causes a tremendous amount of psychological stress (Eschbach et al, 2001). The negative impact of culture shock on individual psychology often includes a large and diverse set of symptoms. Although not everyone will experience all the symptoms, almost all people will experience some parts. The major symptoms may be described as depression, anxiety and feelings of helplessness (Mio, 1999). If depression, anxiety and feelings of helplessness accumulate, the degree and extent of psychological disorientation may be deeper and deeper so that people may have difficulties in paying attention to the learning of new cultures. Moreover, psychological disorientation may influence people's abilities to solve problems and to make decisions. This decreases the motivation for adapting to the new conditions. Most important is that when people fail to defeat the symptoms of culture shock, they are likely to become hostile to host nationals, which may lead to a handicap of interpersonal relationship (Ferraro, 2006). Therefore it appears that dealing with psychological stress caused by culture shock such as depression, anxiety and feelings of helplessness is significant for those people who come into contact with a new culture.

2. Reduction of Psychological Stress: Pre-Departure

In order to decrease psychological stress, people have to make many preparations for culture shock before they go abroad. This period is usually called pre-departure. It is essential and indispensable. If a person is able to make good use of this stage, the impact of culture shock on his psychology will decrease obviously (Cushner, 1994). There are two main methods to be considered in this period: understanding the four stages of culture shock and becoming familiar with the new culture.

2.1 Understanding the four stages of culture shock

First of all, the stages of culture shock should be understood, which can help people predict the difficulties they may experience in a new cultural environment. It has four phases, and each stage can appear only at certain times and show different features. The term "honeymoon" can be used to describe the initial stage. In this stage, people who enter other cultures may be pleased by all of the new things encountered. Then, the second stage emerges after a few weeks. It may start with a series of negative experiences and escalating problems. Culture shock occurs because of inappropriate behaviour in the new cultural environment, which results in a large amount of stress and increasing depression, anxiety, tension and confusion. After that, the adjustment stage appears followed by increased ability to learn how to adjust effectively to the new cultural pattern. A variety of adaptation will be achieved during this phase, so negative effects of culture shock begin to become less and less. The fourth stage is the mastery stage which often comes after one and a half years. In this phase, people are able to solve problems and manage new cultures successfully, and symptoms of culture shock disappear largely (Janssens, 1995).

An understanding of the four phases may provide large help for all people who are prepared against psychological stress caused by culture shock. The reason may be analysed from two aspects. Firstly, it is probable that vague and indistinct events may cause more stress. Therefore people should understand what the problems are, and then they can solve them. It seems that having a comprehensive understanding of events may decrease stress and negative emotions. Secondly, unpredictable or uncontrollable events are more likely to cause stress. It suggests that prediction plays an important part in the reduction of stress and psychological disorientation (Lafreniere & Cramer, 2005). For most people, culture shock is a strange event, which is not only undefined, but also unpredictable, so if these people experience culture shock, their psychological health will be influenced to a great extent. However, if they know the stages of culture shock, they can predict what may happen in the each stage. This may make them face difficulties and troubles leisurely and calmly, and the degree of depression, anxiety and feelings of helplessness may also be alleviated (Jacobs, 2003).

2.2 Becoming familiar with new culture

The four phases of culture shock suggest that adaptation to a new culture is a chronic process, so how to shorten the time of adjust to the new conditions is very helpful for those people who face a new cultural pattern. It appears that becoming familiar with the new environment before departing may be the best method to attain this goal. The main reason is that it can provide an intellectual tool for better understanding why other individuals or groups of people are similar or different. Through the familiarity with the new culture, people can imagine many possible obstacles they will encounter. This makes new surroundings become more acceptable and easier to adjust to (Ferraro, 2006). Therefore, being familiar with a new culture may be considered as the second solution to reduce the negative impact of culture shock on individual psychology.

The more thorough the understanding of a new culture, the smaller the negative impact there will be, because knowledge about the host culture enhances individual capacity to adjust to the new circumstances (Coodman, 1994). For example, in different cultures, much nonverbal behaviour may be different, such as physical space between two talkers. Compared with Americans, Saudi Arabians are accustomed to standing closer in communication. Twenty inches is a normal distance for Americans, but for Saudi Arabians, it means unfriendliness so that they may move closer to make conversation more comfortable. This can be viewed as impolite and uncouth by Americans. Consequently, when a Saudi Arabian enters America, psychological discomfort appears, because they are ill prepared to cope with culture shock and lack relevant knowledge (Ferraro, 2006). According to the example, knowledge and understanding of the new environments can help people study how to behave better. This may lessen psychological disorientation and make people accept new culture as soon as possible. Therefore, the time of experiencing depression and anxiety will be shortened. This method may take much time, and it is impossible to understand all aspects of the new cultures, but it is easy to put into practice and effective because of rich data and information. They can be got from a number of scholarly sources such as books, journal articles and other sources like newspapers and the internet (Ferraro, 2006).

3. Reduction of Psychological Stress: During the Experience

Although pre-departure is a significant period for all people who want to minimize psychological stress caused by culture shock, living and working abroad is a more important period which is called during the experience. It seems that full preparation can improve people's abilities to adjust to new surroundings and make them become more self-confident. However, culture shock will never be totally avoided, because a good preparation only decreases its influence. Therefore, how to reduce psychological stress in the period of during the experience should be considered carefully. In this stage, people have to transform knowledge into practice when they experience stress-related symptoms (Cushner, 1994). When people encounter culture shock, there are three approaches to reduce psychological stress: self-confidence and optimism, accepting new culture and seeking social support.

3.1 Self-confidence and optimism

In the field of social psychology, there is a term self-efficacy which means the conviction or belief of people that they can overcome the obstacles encountered. People with high self-efficacy usually believe that they have abilities to perform tasks well. They work harder and experience less anxiety when getting into trouble, because they have full confidence that they will succeed. Nevertheless, people with low self-efficacy often believe that they cannot perform works well, so they usually tend to give up easily and experience more anxiety when facing troubles. Lack of confidence is the most important reason for their failure (Aronson et al, 2005). Therefore, self-confidence plays a key role in decreasing anxiety and overcoming obstacles.

Likewise, optimism is also very necessary when people experience culture shock, because explaining negative events optimistically can decrease depression and anxiety. This has been proved through scientific research made by Tim Wilson and Patricia Linville in the 1980s (Aronson et al, 2005). First of all, they chose many first-year students who experienced academic difficulties because of the difficulty of adjusting to a new academic environment. When these students did not realize that such adjustment problems are very common and pessimistically assumed that their problems resulted from personal abilities, they were likely to be depressed and anxious. However, when these students optimistically assumed that poor performance was a normal phenomenon and may improve afterwards, they made progress. Therefore, a mood of pessimism may increase psychological stress, while an optimistic attitude may reduce depression and anxiety in a new academic situation. Similarly, when people enter a new cultural environment and experience culture shock, optimism often make them react better to stress, so it exerts positive effects on the reduction of psychological burden.

Although different people use various ways to try to minimize the impact of culture shock on their psychology, it seems that keeping self-confident and optimistic may be the most effective. However, it is difficult for a number of people in the process of cultural adaptation, since people's personalities are diverse. Many people are optimistic and self-confident naturally, but others may tend to see negative events pessimistically. This is hard to change (Aronson et al, 2005). Moreover, unrealistic and excessive optimism or self-confidence would result in many grave consequences. For

instance, excessively optimistic people may enter a new environment without any preparation. This will make them experience more serious culture shock (Ferraro, 2006). Thus, a moderate self-confidence and an optimistic mood are necessary for people to deal with culture shock. Firstly, the change should be thought of as a normal part of the adjustment process rather than threat, and then people should view it as a challenge and try their best to defeat it (Davis & Palladino, 2000).

3.2 Acceptance of new culture

The second method is acceptance, which means accepting other cultures' values and behaviours as not good or bad but simply different. Once people are able to accept them, they will be more comfortable and able to minimize psychological stress. Nevertheless, it is not an easy method. People need to understand with great willingness and pleasure not only what people do and believe, but also why they do it. Therefore, interest, curiosity and willingness are essential, and reluctant acceptance will cause more psychological discomfort (Phillips, 2003). However, not all parts of a different culture can be accepted. This is a normal phenomenon. Under this condition, tolerance and keeping an open mind toward local culture may be easier than willing acceptance. In addition, making an attempt to respect local customs and traditions may be also a relatively easy way, which could be a prerequisite for the acceptance of new culture. For example, people usually smile when they want to express happiness and friendly attitude in most countries. However, in many Asian countries, smiling is a sign of weakness, and people are likely to talk with each other without smiling. Therefore, people who enter these Asian countries from other cultural backgrounds may feel that local people are unfriendly. It may be difficult for people to accept this difference with pleasure, but a tolerant attitude and an open mind may make them communicate better with the host nationals (Ferraro, 2006).

3.3 Social support

Finally, seeking social support is also regarded as an effective way during the anti-stress process, which means people receive consolation, caring, encouragement, advice, approval and help from others around them. It seems that people who have friends to lean on deal with stress better. When social support decreases, common psychological problems such as depression, anxiety and feelings of helplessness increase. Research in different cultures provides evidence for the importance of social support. People who live in cultures that stress interdependence suffer less from psychological stress than people who live in cultures that emphasize independence. Therefore, social support plays a role in reducing possible negative side effects of major life events and daily hassles (Lafreniere & Cramer, 2005). For instance, when people encounter many difficulties such as culture shock, their friend may help them analyze the reason and give them a number of suggestions about how to do better in future (Aronson et al, 2005).

People who are able to develop friendly relationships with local nationals will get more social support easily, whereas others who are not good at social intercourse may fail to do this. Therefore, they often seek social support through other ways. For most people, one desirable way is keeping in touch with members of family through email or satellite phone. These modern tools of communication create a better chance for people who are far away from home to communicate with their parents. This may reinforce people's senses of security. Moreover, depression, anxiety and feelings of helplessness may be reduced, because people usually feel that they can freely express fears and stress and comfortably receive encouragement and support from other family members (Scheyvens, 2003).

4. Application and Problems

4.1 Choice of methods

After giving a number of methods and evaluations for coping with the negative impact of culture shock on individual psychology, it appears that not every method is very effective for all people, so choosing suitable solutions is significant. Understanding the process of culture shock and being familiar with new cultural patterns may be two favourable methods. They are suitable and effective for all people who want to reduce psychological stress result from culture shock, because it is easy for people to collect relevant information through books and the internet. However, people who choose these methods have to take much time to accumulate new knowledge as much as possible and make full preparations. It is generally agreed that although people cannot avoid culture shock completely, preparation may add to their capacities to overcome stress when facing it (Cushner, 1994). Compared with them, self-confidence and optimism, accepting the new culture, and seeking social support are also feasible, but their effects are easily influenced by disposition and character. Nevertheless, for those people who are self-confident, optimistic, and good at making friends, these methods are long term solutions. If they adopt these ways, even though they are unfamiliar with the new culture, it is possible for them to control psychological stress successfully. Therefore, appropriate and suitable methods should be chosen according to individuality.

4.2 Advantages of stress

It is found that reduction of psychological stress is significant when entering new cultural environments. However, there is a key point should be taken into account carefully. It is that dealing with culture shock does not mean the thorough elimination of negative emotion. Firstly, it is impossible to eliminate stress completely. Secondly, a certain amount of

anxiety and depression may provide motivation for people to learn the new culture and adjust to the cross-cultural environment (Ferraro, 2006). Therefore, facing stress with the right attitude and transforming negative emotion into positive motivation may help people keep psychological health and minimize culture shock successfully.

5. Conclusions

In the process of international communication, culture shock is becoming more and more common because of cultural diversity. From one culture to another, the differences among them cause people's feelings of unfamiliarity. This results in a large amount of psychological stress such as depression, anxiety and feelings of helplessness. This paper has given five solutions and evaluations about how to deal with these symptoms caused by culture shock. Before entering a new cultural environment, it is very important for all people to make full preparation. Understanding the process of culture shock and features of a new culture may be useful for all people, because knowledge can be acquired through a number of channels. Then, when experiencing culture shock, self-confidence and optimism, accepting new cultures and seeking social support may be three effective ways for most people to overcome psychological discomfort. In addition, a certain amount stress can stimulate passion for cultural learning which may speed up people's adaptation to new cultural circumstances. Therefore, reducing psychological stress to a controllable level should be more feasible than thorough elimination.

For those people who are on the point of entering new cultural environments to study or work, this project may provide advice and assistance for them to minimize the negative effects of culture shock and maintain healthy psychology. However, People who have lived abroad often find that the adjustment to returning home is more difficult than their adjustment to the foreign culture. This phenomenon is called reverse culture shock, which has been experienced by most people who return from abroad. Therefore, more scientific researches on reverse culture shock should be made in future years.

References

Aronson, E., Wilson, T. D., & Akert, R, M. (2005). *Social psychology* (5th ed.). New Jersey: Pearson Education.

Coodman, N. R. (1994). Training for the global executive. In Brislin, R. W., & Yoshida, T. (Eds), *Improving intercultural interactions: Modules for cross-cultural training programs*. London: Sage Publications.

Cushner, K. (1994). Cross-cultural training for adolescents and professionals who work with youth exchange programs. In Brislin, R. W., & Yoshida, T. (Eds), *Improving intercultural interactions: modules for cross-cultural training programs*. London: Sage Publications.

Davis, S. F., & Palladino, J. J. (2000). *Psychology* (3rd ed.), New Jersey: Prentice Hall.

Eschbach, D. M., Parker, G. E., & Stoeberl, P. A. (2001). American repatriate employees' retrospective assessments of the effects of cross-cultural training on their adaptation to international assignments. *International Journal of Human Resource Management*, 12(2), 270-287.

Ferraro, G. P. (2006). *The cultural dimension of international business* (5th ed.). New Jersey: Pearson Education.

Hess, J. D. (1994). *The whole world guide to culture learning*, Yarmouth: Intercultural Press.

Jacobs, K. (2003). Culture shock. [Online] Available: http://www.hagshama.org.il/en/resources/view.asp?id=1445 (April 15, 2008).

Janssens, M. (1995). Intercultural interaction: A burden on international managers. *Journal of Organizational Behaviour*, 16(2), 155-167.

Lafreniere, K. D., & Cramer, K. M. (2005). Applying social psychology to health. In Schneider, F. W., Gruman, J. A., & Coutts, L. M. (Eds), *Applying social psychology: understanding and addressing social and practical problems*, London: Sage Publications.

Mio, J. S. (1999). *Key words in multicultural interventions*: *A dictionary*. Westport: Greenwood Publishing Group.

Mitchell, C. (2000). *Short course in international business culture*. Novato: World Trade Press.

Phillips, J. (2003). *In the know in Japan: the indispensable guide to working and living in Japan*. Westminster: Random Information Group.

Scheyvens, R. (2003). *Development fieldwork: a practical guide*. London: Sage Publications.

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