

PREDICTORS OF SUICIDAL IDEATION AMONG POLICE PERSONNEL

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Abstract *Suicidal ideation is the first warning sign of more serious suicidal behavior. Suicide ideation constitutes but one aspect of suicidal behavior, and is defined as the domain of thoughts and ideas about death, suicide, and serious self-injurious behavior. The present investigation was planned to study predictors of suicidal ideation among police personnel. The sample for the study consisted of 202 police personnel (head constable=125, inspector=77) who aged between 24 and 58 years. The subjects were assessed with Neo- Five Factor Inventory, Scale for Suicide Ideation, Occupational Stress Index, and Ways of Coping Questionnaire. Data were processed by correlation and regression analysis. The results revealed that suicidal ideation is significantly associated with personality, occupational stress, and coping among police personnel. Step-wise regression analysis identified three predictors of suicidal ideation, i.e., unreasonable group and political pressures, positive reappraisal, and escape avoidance. The results of step-wise regression analysis revealed that the linear combination of unreasonable group and political pressures, positive reappraisal, and escape avoidance account for significant proportion of variance (15%) in suicidal ideation among police personnel.*

Keywords: *Suicidal Ideation, Personality, Occupational Stress, Coping.*

The word “suicide”, first used by Sir Thomas Brown in 1642 in his “Religio Medici”, has evoked a variety of reactions in public minds. These reactions vary from anger, distress, ridicule, anxiety, tension, fear, sadness, and stigma. Suicide means, “an intentional determination to end one’s life, an unexpected way of death, where the willingness to die originates within the person and there is the presence of known or unknown causes to end one’s life”. Suicide, whether completed, attempted, or considered, is also a state where available options and future possibilities are never considered before the act. Throughout history, the word ‘suicide’ has had different meanings to different people. Various meanings attributed to the term include “the murder of oneself”, “nothing less than a exit”, “an end to psychic conflicts”, “a conscious act of self-inflicted cessation”; “an act of despair of which the result is not known, occurring after a battle between an unconscious death wish and a desire to live better”, “to love and be loved”, “to live or not to live”, and others. In whatever way the word is defined and understood, undeniably it is an act of self-destruction and a major loss to the society.

There is considerable debate all over the world as to why people commit suicide, since self-destruction of human beings has always been a matter of curiosity. Since suicide is an act of killing oneself that is performed by the person with his/her full knowledge, and knowing fully well the results of the final outcome, it is always considered something very

close to the person committing the act. The various causes for suicide are by and large multifarious and complex, ranging from social, economic, health, cultural, political, religious, and other aspects of an individual’s life. Recent research indicates that suicides are multidimensional and cumulative in nature due to a number of causes which are progressive and operate over a period of time. A small percentage of impulsive suicides have been extremely difficult to understand.

LITERATURE REVIEW

International suicide rates have shown consistent pattern over line, striking variations between countries are evident with low suicide rates in southern Europe and high rates in Western Europe. The rise in suicide rates in recent times of people belonging to the age of 15-24, especially men, is a matter of concern. This has been most evident in English speaking nations, whose suicide rates generally lie between the above extremes. In young, in recent decades there has been marked increase in rates of depression (Klerman, 1988; Fornbonne, 1995) and alcohol consumption, both of which are major risk factors for suicide. So, one must consider mental health epidemiology in order to understand the suicide behavior.

Hem, Berg, & Ekeberg (2004) have described suicide among the police as an epidemic. It is claimed that the

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suicide rate of law enforcement personnel is between two and three times higher than that of the general population. Repetitive citations may have given the impression that suicide rate among the police is remarkably greater than that for other occupational groups. However, research on police suicide has yielded widely varying rates, ranging from 5.8 to 203.7 per lakh. Perhaps, the greatest challenge is the lack of reliable empirical evidence on police suicide. It is noted that so far no comprehensive review has been published about epidemiologic studies among police. Marzuk et al. of the New York City police published a first systematic review of suicide among police and strict methodological inclusion criteria were applied to the original studies.

In India more than one lakh people lost their lives by committing suicide during the year 2007 (National Crime Records Bureau). This indicates an increase of 3.8% over the previous year's figure. The number of suicides in the country during the decade (1997–2007) has recorded an increase of 28.0% (from 1997 to 2007). The increase in incidence of suicides was reported each year during the decade, except in 2000 and 2001. The population has increased by 19.0% during the decade and the rate of suicides has increased by 28%. The rate of suicides has shown a declining trend since 1999 to 2003. A mixed trend was observed during 2003 to 2007. The overall male and female ratio of suicide victims for the year 2007 was 65:35. However, the proportion of boy and girl suicide victims (up to 14 years of age) was 48:52, i.e., almost equal number of young girls have committed suicide as their male counterparts.

Many factors may contribute to suicidal ideation or suicidal behaviour, including stress in the work situation, factors outside the work situation and personality dimensions, as well as the interaction between these variables (Schmidtke, Fricke, & Lester, 1999). According to the holistic model of work well being, suicide ideation can be regarded as an outcome of distress. Suicidal behaviour often occurs as response to a situation that the person views as overwhelming, such as social isolation, death of loved one, emotional trauma, serious physical illness, growing old, unemployment or financial problems, guilt feelings, and alcohol or other drug dependence.

SUICIDAL IDEATION AND PERSONALITY

The personality traits have become the focus of increasing research and clinical interest in relation to suicidal ideation or suicidal behavior. Some of the traits with possible predisposing effects for suicidality are neuroticism, impulsivity, affect deregulation, and extroversion. Studies have consistently indicated that neuroticism is positively related to suicidal thinking (Kerby, 2003; Lolas, Gomez, & Suarez, 1991; Velting, 1999), probably because neuroticism

is associated with depression. Increased suicidal ideation has also been associated with low level of extroversion, which reflects a low propensity to experience positive emotions (Kerby, 2003; Lolas et al., 1991). Kerby (2003) found that low conscientiousness and low agreeableness are also related to increased suicidal ideation. Studies have found that psychoticism, a dimension in Eysenck's personality system is significantly related to suicide. Kerby has argued that psychotics in his system is related to agreeableness and conscientiousness. In the Big Five system, one might expect that high suicide ideation would be related to either low agreeableness or low conscientiousness, or both. If conscientiousness is associated with poor job performance (Rothmann, Meiring, Walt, & Barrick, 2002), and if poor job performance is associated with stress and suicide ideation, then low conscientiousness might be related to suicide ideation.

SUICIDAL IDEATION AND OCCUPATIONAL STRESS

It is difficult to imagine a life without stress. Each and every one has anecdotal evidence from one's own life that supports the idea that stress is an inevitable part of life. Occupational stress has been described as the experience of negative feelings such as frustration, worry, and anxiety, which are perceived to arise from work related factors (Kyriacou, 2001). There exists a substantial body of literature describing teaching as a stressful occupation and suggesting that stress among teachers appears to be an increasing problem (Antoniou, Polychroui, & Vlachakis, 2006; Guthrie, 2006; and Kyriacou, 2001). While the literature concerning occupations stress in school settings has, naturally enough, focused on teachers, there has been far too little investigation of this phenomenon in non-teaching staff members. Occupational stress has been associated with burnout, which is considered a product of long term exposure to stress (Burke & Greenglass, 1994; Mearns & Cain, 2003), which sometimes leads to suicidal behaviour. It has also been strongly associated with temporary and chronic illness, such as headache, hypertension, reduced immune response, stomach complaints, ulcers, depression, and stroke (Ashcraft, 1992; Guthrie, 2006; and Kyriacou, 2001).

SUICIDAL IDEATION AND COPING

Coping is a multi-dimensional and contextual construct (Lazarus & Folkman, 1984). Factors such as environmental demands, personal resources, appraised threat level, and meaning or emotional investment may have mediating or moderating effects on the coping process. Lazarus and Folkman have noted that coping is "a person's constantly changing cognitive and behavioural efforts to manage

specific external or internal demands that are appraised as taxing or exceeding the resources of the person". This definition implies that coping is a process involving thoughts and behaviour in a specific context. Coping is a function of continuous appraisals and reappraisals of the shifting person-environment relationship.

In order to combat the various aspects of the stressor, individuals develop a variety of coping mechanisms. While not everyone possesses or develops all the mechanisms, there is a relatively small pool of mechanisms from which individuals typically draw. These mechanisms are in place before the individual encounters the stressor and are not as reactive as many of the identified coping responses (Lazarus & Folkman, 1984). During the appraisal process, the individual measures the perceived threat against their inherent store of mechanisms with which to combat that threat. The level of stress is lower if the individual perceives that they have more mechanisms at disposal to cope up with the threat. When the threat occurs, individuals will more successfully overcome the threat if they have more available coping mechanisms from which they can draw upon.

RATIONALE OF THE PRESENT STUDY

Recent reviews regarding suicidal ideation pointed to the fact that it is complex and multifaceted in nature. Literature reveals that it has been explained in terms of three aspects, i.e., suicidal thoughts, suicide attempts, and suicide committed. Many factors may contribute to suicidal behaviour (ideation), including stressors in the work situation, factors outside the work situation and personality dimensions, as well as the interaction between these variables. Though, many studies are available in literature related to some variables of the study, the relationship between suicide ideation and personality traits in police settings has received limited research attention. Poor coping skills may be a significant predictor of stress as well as suicidal ideation.

OBJECTIVES OF THE STUDY

1. To examine the relationship of suicidal ideation with personality, occupational stress, and coping among police personnel.
2. To study the predictors of suicidal ideation among police personnel.

HYPOTHESES

1. There would be a significant relationship between the measures of personality and suicidal ideation.
2. There would be a negative correlation between suicide ideation and coping.

3. There would be a positive correlation between suicidal ideation and occupational stress.

METHOD

SAMPLE

The sample for the study consisted of 202 Haryana police male personnel taken from various police stations of different districts of Haryana including Hisar, Bhiwani, Kurukshetra, Faridabad, and Fatehabad by using incidental sampling technique. The age range of the subjects varies from 24 to 58 years, and majority of the subjects belonged to middle level in terms of socio-economic status. Male participants who were working in different capacities in the police department were selected for data.

MEASURES

The measures were selected in accordance with the aims of the study. The following measuring tools were used in the present study:

1. Neo- Five Factor Inventory (NEO-FFI)*

The neo-personality inventory measures the five major dimensions of personality and some of the most important facets defining the dimensions. The five domain scale and thirty facet scales of the NEO-FFI is a concise measure of five broad dimensions of personality and replaces the NEO- five factor inventory (Costa and McCrae 1992). As it appeared in 1985, the NEO-PI had well analyzed scale for the facets of Neuroticism (N), Extraversion (E), and Openness (O), but only global scales to measure Agreeableness (A) and Conscientiousness (C). Several enhancements of the NEO-PI were offered to the users in 1989, but the inventory itself remained unchanged.

The NEO-PI-R completes the development of instruments by adding the A and C facet scales that were implicitly premised by the NEO-PI/NEO-FFI professional manual (Costa & McCrae, 1992). Additionally, to allow more accurate measurement of several of their facets, ten of the original N, E, and O items were replaced in the NEO-PI-R. This manual simultaneously provides information on the NEO five factor inventory (NEO-FFI), a 60 items version of the NEO-PI-R that is scored for the five domains only. The NEO-FFI is a useful source of global information and personality is considered sufficient to serve the purpose.

The five scales have been assessed for internal consistencies and test/re-test reliability. The alpha coefficients for the individual facet scale ranged from .56 to .81. The full scale

* Costa & McCrae, 1992.

coefficient alphas ranged from .86 and .95. Other studies using the NEO-PI have reported very similar values for the samples of clinical cases and college students. The test/re-test reliability (with three months interval) of NEO-FFI scales were obtained from a college sample, and the coefficients were found to be .79, .79, .80, .75, and .83 for N, E, O, A, and C scales respectively.

Scale for Suicide Ideation (SSI)**

The scale for suicide ideation was developed by Beck, Kovacs, and Weissman (1979) to meet the need for a valid research instrument for identifying individuals at suicidal risk. The scale quantifies the intensity of current conscious suicidal intent on various dimensions of self-destructive thoughts or wishes. Suicidal ideation also encompasses "suicidal threats" that have been expressed in overt behaviour or verbalized to others. The authors emphasized that the scale is primarily a research tool to be employed in the investigation of suicidal ideation and its correlates. The scale assesses the extent of suicidal thoughts and its correlates. The scale assesses the following attributes: the extent of suicidal thoughts and their characteristics, as well as the patients' attitude towards them; the extent of the wish to die, the desire to make an actual suicide attempt and details of plans, if any; internal deterrents to an active attempt; and subjective feelings of control and/or courage regarding a proposed attempt. Each item consists of three alternative statements graded in intensity from 0 to 2. The total score is computed by adding the individual item scores. Thus, the possible range of scores is between 0 and 38. The internal consistency of the SSI was evaluated through two methods. First, an item analysis showed that each item had a positive correlation with the total scale score and that 16 of the total 19 coefficients were significant. The second method of evaluating internal consistency was the determination of coefficient alpha, KR-20 (Cronbach, 1951). For the 90 cases, a reliability coefficient of .89 was obtained. With respect to inter-rater reliability, 25 of the 90 consecutively admitted patients were seen concurrently by two clinicians who alternated interviewing successive patients. Following the interview, each clinician independently completed the SSI. The inter-rater reliability coefficient was .83 ($p < .001$).

Occupational Stress Index (OSI)***

As a well developed and widely used index, OSI in the Indian context was chosen to assess the occupational stress of the sample. Totally there are 46 items, where 28 are true keyed

and 18 are false keyed with 12 dimensions: 1. Role overloads, 2. Role Ambiguity, 3. Role Conflict, 4. Unreasonable Group and Political Pressure, 5. Responsibility for Persons, 6. Intrinsic Impoverishment, 7. Powerlessness, 8. Poor Peer Relation, 9. Intrinsic Impoverishment, 10. Low Status, 11. Strenuous Working Conditions, and 12. Unprofitability. The reliability index was ascertained by split half (odd-even) method and Cronbach's alpha coefficient for the scales on the whole were found to be .935 and .90 respectively. The reliability indices of the 12 sub-scales were also computed on the (split half) method.

Ways of Coping Questionnaire****

The ways of coping questionnaire developed by Lazarus & Folkman (1998) was used to assess the thoughts and actions the individuals use to cope with the stressful encounters of everyday life. The questionnaire contains 66 items with responses of 4-point Likert scale. The questionnaire comprises of 8 scales and they are: Confrontive Coping (6, 7, 17, 28, 34 & 46), Distancing (12, 13, 15, 21, 41 & 44), Self-Controlling (10, 14, 35, 43, 54, 62 & 63), Seeking Social Support (8, 18, 22, 31, 42 & 45), Accepting Responsibility (9, 25, 29 & 51), Escape-Avoidance (11, 16, 33, 40, 47, 50, 58 & 59), Painful Problem Solving (1, 26, 39, 48, 49 & 52), and Positive Reappraisal (20, 23, 30, 36, 38, 56 and 60). The raw scores describe the coping effort for each of the eight types of coping. High raw score indicates that the person often used the behavior described by that scale in coping with the stressful event. The derived psychometric properties of coping scales are based on an average over five occasions. The alpha coefficient for these scales is found ranges between .61 and .79. As far as the validity of the questionnaire is concerned, the auto correlations were obtained on different occasions by the author. The construct validity of the scale is also supported to the extent that the findings are consistent with the theoretical prediction. This is a widely used and internationally accepted research instrument.

PROCEDURE

The investigator visited the police stations personally and permission was taken from the authority to conduct the study. Before the administration of the tests, a brief description was given to the subjects to establish appropriate rapport with them. The subjects were not only explained the purpose and significance of collecting required information from them, but were also assured that the information would be kept confidential and utilized for research purpose only. The main objective of the study was not disclosed to the subjects

** Beck, Kovacs, & Weissman, 1979.

*** Srivastava & Singh, 1984.

**** Lazarus & Folkman, 1988.

Table 1: Correlation of Suicidal Ideation with Different Variables

Variables	Items	r
Personality	Neuroticism (N)	.22**
	Extraversion (E)	-.08
	Openness(O)	-.02
	Agreeableness(A)	-.21**
	Conscientiousness(C)	-.13*
OCCUPATIONAL STRESS INDEX	Role Overload (RO)	.13*
	Role Ambiguity (RA)	.25**
	Role Conflict (RC)	.21**
	Unreasonable Group and Political Pressures(UPP)	.27**
	Responsibility for Persons(RP)	.04
	Under Participation(UP)	.12
	Powerlessness (PWLN)	.04
	Poor peer Relations (PPR)	.08
	Intrinsic Impoverishment (IIMP)	.22**
	Low Status(LS)	.22**
	Strenuous Working Conditions (SWC)	.14*
	Unprofitability (UFB)	.03
COPING	Confrontive Coping (CC)	-.05
	Distancing (DS)	-.03
	Self Controlling(SC)	-.09
	Seeking Social Support (SSS)	-.06
	Accepting Responsibility(AR)	-.05
	Escape Avoidance (EA)	.12
	Painful Problem Solving(PPS)	-.09
	Positive Reappraisal (PR)	-.22**

**p< .01 level *p<.05 level

because of the negative meaning the construct of suicidal ideation is bearing. The tests were strictly administered individually according to the instructions and administration procedures mentioned in respective manuals of the tests. All attempts were made to get the maximum cooperation of subjects. The investigator collected the testing material back after confirming that all the particulars were duly filled and none of the items of the test were left blank.

STATISTICAL ANALYSIS

The investigator used appropriate statistical techniques to analyze and draw inference from the different types of scores available. The analyses are done with the help of SPSS 17.1 version. The obtained data were analyzed for Pearson's product moment correlation and was analyzed with multiple stepwise regression analysis.

RESULTS AND DISCUSSION

Pearson product moment correlation procedure was applied to see the association between the study variables.

Correlation Between Suicidal Ideation and Measures of Personality

The inter-correlation between measures of personality and suicidal ideation ranges between .02 and .22. Suicidal ideation has positive correlation with Neuroticism ($r = .22$, $p < .01$) and negative correlation with Agreeableness ($r = -.21$, $p < .01$) and conscientiousness ($r = -.13$, $p < .05$). It may be interpreted that the highly anxious, depressed, and impulsive people are liable to have high suicidal thoughts, whereas the people who are altruistic, and are having a high tendency to trust others, and comply with others are low on suicidal thoughts. Present results are confirmed by earlier studies, i.e., by Kerby, 2003; Enns et al. 2003; Brezo et al., 2006; Heisel et al. 2006; and Pompil et al. (2008)). Fergusson et al. (2000) reported that there is a significant

Table 2: Summary of Stepwise Multiple Regression Analysis of Dependent Variable: Suicidal Ideation

Step	Variable	R	R Square	F	Sig.
1.	Unreasonable Group and Political Pressures(UPP)	.26	.07	14.83	.001
2	Positive Reappraisal (PR)	.33	.11	12.37	.001
3	Escape Avoidance(EA)	.38	.15	11.42	.001

relationship between neuroticism and suicidal ideation, and that the same holds true for neuroticism and attempted suicide. High levels of anxiety or negative affectivity have been equally implicated in completed suicide.

Correlation Between Measures of Coping and Suicidal Ideation

In general, the correlation between the eight measure of coping and one measure of suicidal ideation are low ranging from .03 to .22. Out of eight correlations, only one correlation has a significant relationship with suicidal ideation. Positive Reappraisal (PR) has significant negative correlations with suicidal ideation ($r = -.22$) It may be interpreted as an effort to create positive meaning by focusing on personal growth which will amount to a lower suicidal ideation among people. Present results are confirmed with earlier studies by Kotler et al., 1994; Edwards et al., 2001; Koch et al., 2006; and Pienaar et al., 2007.

The correlation between suicidal ideation and the measure of occupational stress range between .03 and .27. Out of 12 correlations, 7 are significant. SI is positively correlated with RA ($r = .25$, $p < .01$), RC ($r = .21$, $p < .01$), UPP ($r = .27$, $p < .01$), IIMP ($r = .22$, $p < .01$), and SWC ($r = .14$, $p < .05$). It shows that police personnel with high role ambiguity, role conflict, unreasonable group and political pressure, intrinsic impoverishment, low status, and strenuous working conditions tend to have high suicidal thoughts. Some of the earlier studies explore the relationship between occupational stress and suicidal ideation. (Gershon et al., 2002; Rothmann, & Strijdom, 2002; Steven, (2004) and Pienaar et al., [2007]).

MULTIPLE REGRESSION

The stepwise regression equation starts out empty and independent variables are added in steps, one at a time, provided they meet the statistical criteria for entry (F with $< .05$). At each step, the independent variable not in the equation with a smallest probability of F is entered. The independent variables already in the equation may be removed if they fail to contribute towards multiple R^2 . The method terminates when no more variables are eligible for inclusion or removal. The stepwise regression is the suggested path to the prediction equation when one is

interested in identifying a subset of potent predictors that are helpful in eliminating those which do not provide additional prediction to the predictors already entered (Tabachnick, & Fidell, 1989). The purpose of applying the regression procedure was to find out the predictors of suicide ideation.

Table 2 shows the results of stepwise regression analysis for the dependent measure of suicidal ideation in the sample of police personnel. The predictors' Unreasonable Group and Political Pressures (UPP), Positive Reappraisal (PR), and Escape Avoidance (EA) jointly account for 15% of the variance ($R^2 = .15$) in suicidal ideation faced by the police personnel. Results indicate that three significant predictors of suicidal ideation are Unreasonable Group and Political Pressures, Positive Reappraisal, and Escape Avoidance.

The Unreasonable Group and Political Pressures being the most pertinent predictor of suicidal ideation, it entered in the equation at step one. The R for this variable equal to .26, and $R^2 = .07$, and its F entering being 14.83, it is significant at .001 probability level. It indicates that occupational stress is a very strong predictor of suicidal ideation among police personnel. The Positive Reappraisal is a measure of coping to be another potent predictor which was entered at step two, and multiple R increased to .33 ($R^2 = .11$) with the entry of Positive Reappraisal in the equation after unreasonable group and political pressures. The F ratio computed for the significance of multiple R at step two, equal to 12.37, which is significant at a probability less than .001. Hence it indicates that the Positive Reappraisal is also a strong predictor of suicidal ideation. The last variable entered in regression equation is Escape Avoidance. With the entry of this predictor at step three, the multiple R becomes .38 and $R^2 = .15$. The F ratio at this step is equal to 11.42, and it is significant at .001 probability level.

The results of stepwise regression analysis revealed that the linear combination of Unreasonable Group and Political Pressures, Positive Reappraisal, and Escape Avoidance account for a significant proportion of variance (15%) in suicidal ideation among police personnel. Here it is pertinent to note that despite significant correlation with role ambiguity, role conflict, intrinsic impoverishment, low status, and strenuous working conditions measures of occupational stress, and agreeableness measure of personality, they did not join the set of potent contributors of suicidal ideation. Thus, the results of stepwise regression analysis have clearly revealed that three of the independent variables contribute

significantly to the prediction of suicide tendencies in the above police personnel. The predictor's Unreasonable Group and Political Pressures, Positive Reappraisal, and Escape Avoidance jointly account for suicidal ideation faced by police personnel.

CONCLUSION

In the present study, investigators have found that two factors of personality (agreeableness and conscientiousness) show negative correlation with suicidal ideation, whereas neuroticism shows significantly positive association with suicidal ideation. Results clearly indicate that the highly anxious, depressed, and impulsive personnel tend to have high suicidal thoughts whereas the people who are altruistic, with high tendency to trust in others, and are in compliance with others are low on suicidal thoughts. The result reveals three predictors of suicidal ideation, i.e., Unreasonable Group and Political Pressure (UPP), Positive Reappraisal (PR), and Escape avoidance (EA). All three predictors of suicidal ideation explain the total 15% of the variance in suicide, whereas Unreasonable Group and Political Pressure (UPP) alone explains 7% variance in suicidal ideation among police personnel. It may be concluded that Group and Political Pressure in police department have to be effectively dealt with in order to reduce the suicide prevalence.

REFERENCES

- Antoniou, A. S., Polychroui, F., & Vlachakis, A. N. (2006). Gender and Age Differences in Occupational Stress and Professional Burnout between Primary and High School Teachers in Greece. *Journal of Managerial Psychology* 21, pp. 682-690.
- Ashcraft, D. M. (1992). *Health in Work Place in Kelley, K. Issues, Theory and Research in Industrial/Organizational Psychology*. (pp. 295-283). Amsterdam: Elsevier Science Publication.
- Beck, A. T., Kovacs, M., & Weissman, A. (1979). Assessment of Suicidal Intention: The Scale for Suicidal Ideation. *Journal of Consulting Clinical Psychology*, 47, pp. 343-352.
- Brezo, J., Paris, J., & Turecki, G. (2006). Personality Traits as Correlates of Suicidal Ideation. *A Systematic Review: Acta Psychiatrica Scandinavica*, 113, pp. 180-206.
- Burke, R. J., & Green, G. E. (1994). A Longitudinal Study of Psychological Burnout in Teachers. *Human Relations*, 47, pp. 1-15.
- Costa, P. T., & McCare, R. R. (1992). *Professional Manual: NEO-Five Factor Inventory*. Odessa, Florida: Psychological Assessment Resources, Inc.
- Edwards, M. J., & Holden, R. R. (2001). Coping, Meaning in Life and Suicidal Manifestations: Examining Gender differences. *Journal of Clinical Psychology*, 57, pp. 1517-1543.
- Enns, M. W., Cox, B. J., & Beauregard, I. M. (2003). Personality Predictors of Outcomes for Adolescents Hospitalized for Suicidal Ideation. *Journal of the American Academy of Child and Adolescent Psychiatry*, 42, pp. 720-727.
- Fergusson, D. M., Woodward, L. J., & Horwood, L. J. (2000). Risk Factors and Life Processes Associated with The Onset of Suicidal Behaviour during Adolescence and Early Adulthood. *Psychological Medicine*, 30, pp. 23-29.
- Folkman, S. & Lazarus, R. S. (1998). *Ways of Coping Questionnaire Manual*. California, USA: Consulting Psychological Press, Inc.
- Fornbonne, E. (1995). Depressive Disorder: Time Trends and Possible Explanatory Mechanisms, In M. Rutter and D. J. Smith (eds.). *Psychological Disorder in Young People: Time Trends and Their Causes*. Chichester: Wiley.
- Gershon, R. R. M., Lin, S., & Li, X. (2002). Occupational Stress in Aging Police Officers. *Journal of the Occupational and Environmental Medicine*, 44(2), pp. 160-167.
- Guthrie, R. (2006). Teachers and Stress. *Australia & New Zealand Journal of Law & Education*, 11(1), pp. 5-18.
- Heisel, M. J., Duberstein, P. R. Conner, K. R. F. N., & Bechman, C. (2006). Personality & Reports of Suicide Ideation among Deforested Adults 50 Years Age or Older. *I Affect Disorder*, 90, pp. 175-180.
- Hem, E. Berg, A. M., & Ekeberg, O. (2004). Suicide in Police - A Critical Review. *Suicide Life Threatening Behaviour*, 31, pp. 224-233.
- Kerby, D. S. (2003). CART Analysis with Unit- Weighted Regression to Predict Suicidal Ideation from Big Five Traits. *Personality & Individual Difference*, 35, pp. 249-261.
- Klerman, G. L. (1988). The Current Age of Youthful Melancholia: Evidence for Increase in Depression in Adolescent and Young Adult. *British Journal of Psychiatry*, 152, pp. 4-14.
- Koch, B. J. (2006). The Psychological Impact on Policy Officers of Being first Responders on the Scene of a Competed Suicide & How They Mediate this Experience. *Humanities & Social Sciences*, 66, pp. 2723.
- Kotler, M., Finkelstein, G., Molcho, A., & Botsis, A. J. (1993). Correlates of Suicide and Violence Risk in an Inpatient Population. *Psychiatry Research*, 47(3), pp. 281-290.
- Kyriacou, C. (2001). Teacher Stress Directions for Future Research. *Educational Review*, 53, pp. 27-35.
- Lazarus, R. S. & Folkman, S. (1984). *Stress Appraisal & Coping*. New York: Springer.

- Lolas, F., Gomez, A. & Suarez, L. (1991). EPQ- R and Suicide Attempts: The Relevance of Psychoticism. *Personality & Individual Differences*, 12(9), pp. 899-902.
- Marzuk, P. M., Matthew, M. D., Nock, M. S., Leon, A. C., Portera, M. S., & Tardiff, M. D. (2002). Suicide among New York City Police Officer's. *The American Journal of Psychiatry*, 159(7), pp. 2069-2071.
- Mearns, C. (2003). Relationship between Teacher's Occupational Stress and Their Burnout and Distress: Role of Coping and Negative Mood Regulations Expectancies. *Anxiety Stress and Coping*, 16(1), pp. 71-82.
- Pienaar, J., Sebastiaan, R., Fans, J. R. & Van, D. V. (2007). Occupational Stress, Personality Traits, Coping Strategies and Suicide Ideations in the South African Police Service. *Criminal Justice & Behaviour*, 34, pp. 246-258.
- Pompillim, R., Akiskal, H. S., & Inmenotrian, I. P. (2008). Temperament and Personality Dimensions in Suicidal and Non-suicidal Psychiatric Impatients. *Psychopathology*, 41, pp. 312-321.
- Rothman, S. & Strijdom. (2002). Suicide Ideation in the South African Police Services in the North-West Province. *South African Journal of Industrial Psychology*, 28(1), pp. 44-48.
- Rothmann, S., Meiring, D., Walt, V. D. H. S., & Barrick, M. (2002). *Predicting Job Performance Using Personality Measures in South Africa*. Paper Presented at the 17th Annual Conference of the Society for Industrial and Organizational Psychology. Toronto, Canada.
- Schmidtke, A., Fricke, S., & Lester, D. (1999). Suicide among German Federal and State Police Officers. *Psychological Reports*, 84(1), pp. 157-166.
- Srivastava, A. K. & Singh, A. P. (1984). *Manual of Occupational Stress Index*. Varanasi: Rupa Psychological Centre.
- Steven, S. (2004). Suicide among Social Workers: A Research Note. *Archives of Suicide Research*, 8(4), pp. 379-388.