

Anxiety and styles of coping with occupational stress resulting from work with ‘dangerous’ prisoners in prison service officers

Tsirigotis K, Gruszczyński W, Pęczkowski S. Anxiety and styles of coping with occupational stress resulting from work with ‘dangerous’ prisoners in prison service officers.

Objective: Prisoners categorised as ‘dangerous’ are a category of prisoners that require and/or force into using special measures of caution, protection and security. The aim of the study was to examine the intensity of anxiety (as a state and as a trait) experienced by officers working with ‘dangerous’ prisoners and styles of coping with stress they adopt.

Methods: A total of 40 officers working with ‘dangerous’ prisoners (the study group, SG) and 60 officers of the security department not working with ‘dangerous’ prisoners (the reference group, RG) were studied. The intensity of anxiety was assessed applying the Polish version of ‘State-Trait Anxiety Inventory’ (STAI); styles of coping with stress were explored employing the Polish version of ‘Coping Inventory for Stressful Situations’ (CISS) and the author’s own questionnaire. Data were analysed using the mean, standard deviation, difference testing (the Mann–Whitney *U* test), correlation–regression procedure (Kendall’s tau, τ correlation coefficient and forward stepwise multiple regression).

Results: Officers in the SG faced verbal and physical aggression; nevertheless, scores of officers in both the groups were within the interval of mean scores for all the studied STAI and CISS variables. Officers in the SG achieved significantly higher scores on the state-anxiety scale and the Emotion-Oriented Style (EOS), and lower scores on the Task-Oriented Style (TOS) and Social Diversion (SD). The correlation-regression procedure indicated that there were relationships between anxiety and styles of coping with stress but they differed slightly between the groups.

Conclusions: Officers in the SG feel state anxiety stronger and display a stronger preference for the EOS than officers in the RG. Officers in the RG more strongly prefer the TOS and SD. State anxiety is a variable negatively explaining the TOS in the SG, whereas anxiety as a trait is a variable explaining the EOS in both the groups. The coping styles of warders dealing with dangerous prisoners are different and may need specific psychological counselling and training programmes.

**Konstantinos Tsirigotis¹,
 Wojciech Gruszczyński²,
 Sebastian Pęczkowski³**

¹Department of Psychology, Jan Kochanowski University in Kielce, Piotrków Trybunalski Branch, Piotrków Trybunalski, Poland; ²Institute of Applied Psychology, Social University of Sciences, Lodz, Poland; and ³Remand Centre, Piotrków Trybunalski, Poland

Keywords: anxiety; dangerous prisoners; prison service; security department officers; styles of coping with occupational stress

Dr. Konstantinos Tsirigotis, Department of Psychology, Jan Kochanowski University, Piotrków Trybunalski Branch, Słowackiego 114/118 street, 97-300 Piotrków Trybunalski, Poland.

Tel: (+48 44) 732 74 00 ext. 149;

E-mail: psyche1@onet.eu; konstantinos.tsirigotis@ujk.edu.pl; k.tsirigotis@unit.pl

Accepted for publication April 24, 2015

First published online May 29, 2015

Significant outcomes

- Officers in the study group (SG) feel anxiety as a state ($X-1$), stronger than officers in the reference group (RG).
- Officers in the SG prefer the Emotion-Oriented Style (EOS).
- Officers in the RG prefer the Task-Oriented Style (TOS) and Social Diversion (SD).
- State anxiety ($X-1$) is a variable negatively explaining the TOS in officers in the SG.
- Trait anxiety ($X-2$) is a variable explaining the EOS in both the groups of officers, that is, RG and SG.
- Results of the study seem to suggest the need for psychological and psychotherapeutic support in the group of officers working with dangerous prisoners or periodic changes of their workplace.

Limitations

- The sample size may be a possible limitation (but are commonly known the difficulties in obtaining data from people working in prisons, due to the hermetic workplace of that professional group).

MOTTO: ‘ ... stress is greatest in the tense and dangerous world of the maximum-security institution’ (Huckabee R.G.).

Introduction

The Prison Service, one of the few institutions characterised by the hermetic nature of its activities, is increasingly becoming the subject of research.

Risks faced by that professional group include direct risks posed by prisoners, emergency actions, aggressive behaviours of prisoners, situations of conflict among prisoners that require officers’ response and deviant behaviours of prisoners; a source of intense stress are the so-called prisoners’ collective actions, that is, prison riots (1–11).

Among individuals imprisoned in organisational units of the Prison Service, a small percentage of the population comprises prisoners who should be isolated not only from the society but also from other prisoners. Prisoners posing a serious threat to the society or a serious threat to the security of a prison or remand centre, commonly referred to as dangerous, are still a debatable topic in the Polish penitentiary science.

Prisoners categorised as the so-called dangerous are a category of prisoners that require and/or force into using special measures of caution, protection and security. The category of a dangerous prisoner has been present in the Polish penitentiary system since the early 1990s but it was only in 2004 that recommendations were issued on how custodial sentence should be served by convicts posing a serious threat to the society or a serious threat to the security of a penal institution. They emphasised that officers to be assigned to work with dangerous prisoners should be those who will be capable of fulfilling that task; hence, such who are professionally trained, have appropriate personality predispositions, expertise and ability to manage in extreme situations. Officers to be assigned to work with dangerous prisoners are those having appropriate psychophysical predispositions, high professional qualifications and competences and well-tested ability to manage in situations of danger. Moreover, personnel working with dangerous prisoners is obligated to regularly participate in various kinds of training, courses, workshops and practical exercises (12). Currently, the legal act regulating requirements to be met by an

officer in order to work with dangerous prisoners is Instruction No. 15/10 of the Director-General of the Prison Service of 13 August 2010; other acts governing that issue include the Executive Penal Code, Regulation of the Minister of Justice of 31 October 2003 and Order No. 43/2010 of the Director-General of the Prison Service of 13 August 2010.

The profession of a Prison Service officer (or Correctional Officer), as the profession of a public officer within other services, is among those that rank highest as risky, dangerous and thus stress-inducing professions. Public officers are very often exposed to stress, long-term states of tension as well as physical and mental exhaustion (13–15). But there are some concerns, for example safety or perceived dangerousness, more important for prison service officers than others (16). It is estimated that 37% of prison officers experience job stress and this is higher than the estimated 19–30% in the general population (17).

While analysing contemporary problems of the penitentiary system, it can be observed that there has been an increase in the number of stressful situations in the work of prison personnel in the last few years. That is especially noticeable in prisoner–officer relations, that is, in the highest risk group that comprises, first of all, warders working with dangerous prisoners. Those situations include, among others: increasing threat of violence, aggression of prisoners both on the premises of penitentiary units and outside prison walls, threatening calls, terrorising of family members, corruption proposals. As an inseparable element of work with dangerous prisoners, all the specified stress-inducing and other situations create many problems and become a source of occupational stress to those officers. Regrettably, fear and anxiety about health and life of one’s own and those closest to one sometimes become impossible to overcome by officers, which results in their resignation from the job (1–5,18,19).

A concise and accurate definition of occupational stress states that occupational stress is tension caused by stress-inducing factors present in the work environment or connected with one’s pursued career (11). In this study, work, occupational or job stress is defined as the psychological discomfort or tension that results from exposure to stressors in the workplace environment (17,20,21). Selye (22) stated that the Greeks, as usual, had a word for stress, that is, *πονος* (ponos), which means toil: the man fights to

restore normalcy. Therefore, it is important to try and develop for oneself appropriate forms of releasing stress and its negative effects while functioning properly in stressful situations. The term 'forms of release' is used interchangeably with the term 'style of coping' by many authors. A style of coping is presented as a set of strategies or ways of coping, available to and characteristic of an individual, a part of which is applied in the process of coping with a specific stressful situation (23). Coping is constantly changing cognitive and behavioural efforts to manage specific external and/or internal demands or stressful situations that are appraised as taxing personal resources (24). In turn, effects of stress may depend, to a much larger degree, on coping with stress rather than a stress-inducing factor; thus, issues connected with human activity aimed at coping with stressful events seem to be crucial (25).

Terms that are vital in this study are anxiety and coping with stress.

Anxiety as a state is presented as a subjectively, consciously perceived feeling of apprehension and tension accompanied by activation of the autonomic nervous system; it is a complex emotional response comprising a subjective, non-specific feeling of tension and threat. In turn, anxiety as a trait is presented as a relatively constant pattern or acquired disposition to perceive objectively non-perilous situations as threatening and readiness to respond to them with inadequately intense anxiety; it is an individual, relatively constant disposition to respond with anxiety and perceive a situation as threatening (26,27).

A style of coping with stress is presented as a relatively constant individual predisposition to use specific forms of coping in a stressful situation (28,29).

Prison officers are worried about inmate violence, overcrowding, prison gangs; as confrontations and inmate violence are relatively common, prison officers often work in a very stressful and dangerous environment. The fear of being assaulted or witnessing violent incidents among inmates is a constant source of stress for officers (1).

The average rates of divorce and stress-related illnesses (i.e. heart disease, hypertension, heart attacks and ulcers) for prison officers were unusually high, and the average life span of prison officers (59 years) was 16 years lower than the national average (16).

It is well documented that prison officers have a greater prevalence of anxiety, hypertension, psychosomatic disorders and behavioural reactions (e.g. drug abuse) (3).

As a result of one of the few research projects on, among others, prison service officers, it was observed that, as compared with other professional groups (among others, police officers, municipal guards,

firefighters), the studied prison service officers have strong personal and social resources to cope with occupational stress. A total of 75% of subjects fell into the group with 'better' strategies, that is, using mainly task-oriented strategies. Furthermore, results of that study indicated that Prison Service officers, more commonly than employees in other professional groups, use strategies of searching for instrumental support. They also more commonly than, for example, police officers or firefighters search for emotional support in stressful situations. On the other hand, they less commonly than others cope with stress by adopting emotion-oriented and avoidant strategies (30).

Due to the hermetic workplace of that professional group, such research is more often conducted among other services such as the Police (cf. 31,32) or Fire Service (cf. 3,13). One should realise, however, that those services, despite their shared professional categorisation, actually perform different tasks which, in turn, generate different stressors.

Therefore, there is no research on anxiety experienced and styles of coping with stress used by Prison Service officers working with prisoners assigned the status of 'dangerous', that is, the very front-line prison (or correctional) officers.

The aim of the study was to examine the intensity of anxiety (as a state and as a trait) experienced by officers working with dangerous prisoners and manners of coping with stress they adopt.

Material and methods

Participants

A total of 40 officers, warders working with 'dangerous' prisoners (the study group, SG) and 60 officers of the security department not working with 'dangerous' prisoners (the reference group, RG) from the same correctional institution in central Poland were studied; the RG was well matched in terms of the socio-demographic characteristics to the SG, from a population of 73 warders. The participation was voluntary and there were no refusals. The intensity of experienced anxiety was assessed using the Polish version of 'State-Trait Anxiety Inventory' (STAI) by Spielberger, Gorsuch and Lushene, as adapted by Spielberger, Strelau, Tysarczyk and Wrześniewski (27); while styles of coping with stress were explored by means of the Polish version of 'Coping Inventory for Stressful Situations' (CISS) by Endler and Parker, as adapted by Szczepaniak, Strelau and Wrześniewski (29). Moreover, officers working with dangerous prisoners filled in a questionnaire form containing a section of basic socio-demographic data and questions concerning their work.

Measures

The STAI is a tool designed to examine anxiety understood as a transient and situation-determined state of an individual as well as anxiety understood as a relatively constant personality trait. The STAI consists of two subscales: one ($X-1$) that serves to measure anxiety as a state (occupational profiled in this work) and the other ($X-2$) designed to measure anxiety as a trait (27).

The CISS questionnaire is meant for diagnosing styles of coping with stress. It contains statements concerning various behaviours that can be displayed by individuals in stressful situations. Scores are presented on three scales: TOS, EOS, AS – Avoidant Style. The latter can take two forms: DS – Distraction Seeking and SD (29).

In order to examine relationships between anxiety and styles of coping in stressful situations a correlation–regression procedure was applied.

Statistical analysis

The statistical analysis of received scores applied descriptive methods and statistical inference methods. In order to describe the mean value for quantitative traits, the arithmetic mean (M) was calculated, while the standard deviation was assumed to be the dispersion measure. The conformity of distributions of quantitative traits with the normal distribution was assessed using the Shapiro–Wilk test. Due to the lack of conformity of distributions of dependent variables with the normal distribution, the statistical processing of received results used non-parametric statistics; the Mann–Whitney ‘ U ’ test to examine inter-group differences and Kendall’s ‘tau’ (τ) correlation coefficient to examine relationships between the studied variables; forward stepwise multiple regression was applied too. For all the analyses, the maximum acceptable type I error was assumed at $\alpha = 0.05$. Asymptotic two-sided test probability p was calculated and $p \leq 0.05$ was considered statistically significant. The statistical analyses were performed by means of the *Statistica PL 10.0 for Windows* statistical package (33).

Results

As already mentioned, the SG of officers was examined by means of the author’s own questionnaire. A majority of them are aged 30–40 (70%) and married (75%). Thus, it can be assumed that they are mostly mature, socially stabilised people with the so-called life experience necessary especially in such jobs. A majority of them (95%) are believers, out of whom 50% are non-practising and 45% are practising.

The level of education also gives grounds for optimism as only 10% have secondary education with no maturity exam and 35% have higher education.

As for the course of their work in the security department, it can be noted that before they started working with dangerous prisoners they had already worked in ordinary security departments and at least half of them had been working with dangerous prisoners for more than 3 years.

Most of the studied officers in the SG (90%) believe that work in the Prison Service is more stress-inducing than work in other jobs; no-one answered ‘no’; only 10% of officers stated that it was hard to tell.

In turn, when comparing work with dangerous prisoners and work with ordinary prisoners, 80% of officers stated that it is more stress-inducing; no-one answered ‘no’.

When assessing risk carried by work with dangerous prisoners, 90% of officers regarded them as an increased-risk prisoner group; no-one answered they are not.

It seems to be a natural consequence of the above to state that work with dangerous prisoners poses greater threats than work with ordinary prisoners (90%); no-one stated it does not.

When answering a question about risks they faced in their work with dangerous prisoners, they listed many: verbal aggression (45%), in the form of a threat (15%), insult (35%), attempted blackmail (15%), assault (15%) and others.¹ It stems from those statements that risks posed by dangerous prisoners are real rather than merely subjectively felt.

Their attitude to psychological help seems to be interesting, particularly in connection with coping with stress: 40% stated they need it; 1/4 (25%) decided they rather do not; and 35% did not know; on the other hand, no-one stated that they definitely do not need it.

The above observations are not without importance for results received further in the study.

Scores of officers in both the groups are within the interval of mean (or average) scores (with few exceptions) for all the studied STAI (Table 1) and CISS (Table 2, Fig. 1) variables.

Table 1 compares scores of officers in both the groups in the STAI (the Mann–Whitney U). Both the groups achieved higher scores on the state anxiety ($X-1$) than trait anxiety ($X-2$) scale. In the case of both the variables, higher scores were obtained by officers in the SG; they achieved statistically significantly higher scores on state anxiety ($X-1$; $p = 0.004$).

¹ The sum of percentages may exceed 100% because one officer could meet several types of threats.

Prison officers, anxiety and coping with stress – dangerous prisoners

Table 1. Comparison of scores (mean \pm SD) achieved in STAI by both officer groups

| Variable | Mean SG | SD SG | Mean RG | SD RG | <i>U</i> | <i>p</i> |
|---------------------|---------|-------|---------|-------|----------|------------|
| X-1 (State Anxiety) | 5.700 | 1.280 | 4.900 | 3.224 | 1261.500 | 0.004 |
| X-2 (Trait Anxiety) | 4.350 | 1.725 | 3.983 | 2.038 | 1554.000 | ns (0.197) |

RG, Reference Group; SG, Study Group; STAI, State-Trait Anxiety Inventory.

Table 2. Comparison of scores (mean \pm SD) achieved in CISS by both officer groups

| Variable | Mean SG | SD SG | Mean RG | SD RG | <i>U</i> | <i>p</i> |
|----------|---------|-------|---------|-------|----------|------------|
| TOS | 4.950 | 1.371 | 5.533 | 1.641 | 1564.500 | 0.03 |
| EOS | 4.150 | 1.696 | 3.467 | 1.867 | 1312.500 | 0.01 |
| AS | 5.600 | 1.368 | 5.750 | 1.810 | 1743.000 | ns (0.834) |
| DS | 5.900 | 1.857 | 5.683 | 1.909 | 1669.500 | ns (0.485) |
| SD | 5.200 | 1.549 | 6.067 | 1.666 | 1323.000 | 0.006 |

AS, Avoidant Style; CISS, Coping Inventory for Stressful Situations; DS, Distraction Seeking; EOS, Emotion-Oriented Style; RG, Reference Group; SD, Social Diversion; SG, Study Group; TOS, Task-Oriented Style.

Table 2 and Fig. 1 show the subjects' CISS scores. It can be observed that the 'profiles' of styles of coping in difficult situations are similar in both the groups of officers: officers in both the groups have more or less equal preferences for specific styles of coping, taking into account scores for each style. The only difference concerns the two forms or 'components' of the AS, that is, DS and SD. Those styles (DS and SD) 'switched their positions' in the rank order: DS ranks first in the SG and third in the RG; and vice versa: SD ranks third in the SG and first in the RG. The other styles of coping with stress have the same positions in both the groups, in the order beginning with the first: AS, TOS and EOS.

However, irrespective of the similarity of the 'profiles' of coping, there are statistically significant differences in specific styles. Officers in the SG obtained higher scores on the EOS ($p = 0.01$) while officers in the RG – on the TOS ($p = 0.03$) and SD ($p = 0.006$).

Along with the intensity of experienced anxiety and preferred styles of coping with stress, relationships between anxiety and styles of coping seem to be an equally important issue. Tables 3 and 4 show correlation coefficients (τ , Kendall's tau) between scores on the STAI and CISS scales for officers in the RG and SG, respectively.

It can be observed that there are statistically significant correlations between scores of the subjects on the STAI scales and their scores on the CISS scales, although they are slightly different in each group of officers.

In officers in the RG, state anxiety ($X-1$) correlates positively with the EOS (0.390, $p = 0.001$), AS (0.265, $p = 0.04$) and DS (0.326, $p = 0.01$) being a form of the AS. In turn, trait anxiety ($X-2$) correlates positively only with the EOS (0.458, $p = 0.001$).

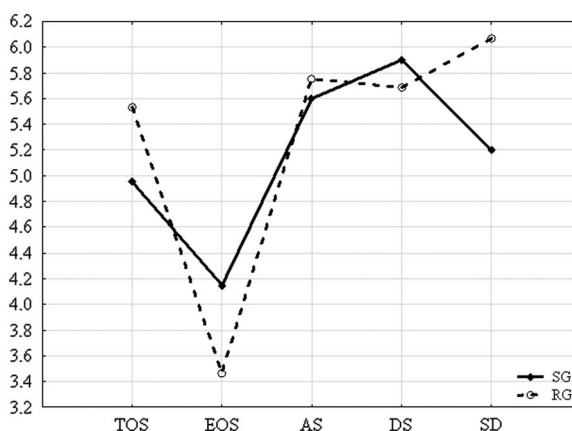


Fig. 1. Scores achieved in Coping Inventory for Stressful Situations (CISS) by both officer groups.

Correlations are slightly different for officers in the SG. State anxiety ($X-1$) and trait anxiety ($X-2$) correlate negatively with the TOS (-0.724 , $p < 0.001$ and -0.593 , $p = 0.006$, respectively) and SD (-0.433 , $p = 0.05$ and -0.496 , $p = 0.02$, respectively), and positively with the EOS (0.604, $p = 0.005$ and 0.726, $p < 0.001$, respectively).

Regardless of the observed correlations, it was decided to examine variables that best explain preferred styles of coping with stress by means of forward stepwise multiple regression where independent variables (explanatory variables, predictors) were two types of anxiety (state, $X-1$; trait, $X-2$) and dependent variables (criterion variables, response variables) were specific styles of coping with stress (TOS, EOS, AS, DS, SD) for each group separately. Both the anxiety variables ($X-1$, $X-2$) were introduced into each consecutive regression equation. Eventually, they remained in

Table 3. Correlation coefficients between RG officers' scores on STAI and CISS scales

| Variable | TOS | EOS | AS | DS | SD |
|-----------------------|----------------------|----------------------|---------------------|---------------------|---------------------|
| $X-1$ (State Anxiety) | -0.040 ns (0.760) | 0.390 $p = 0.001$ | 0.265 $p = 0.04$ | 0.326 $p = 0.01$ | 0.054 ns (0.682) |
| $X-2$ (Trait Anxiety) | 0.011 ns (0.935) | 0.458 $p = 0.001$ | 0.221 ns (0.090) | 0.239 ns (0.065) | 0.061 ns (0.642) |

AS, Avoidant Style; DS, Distraction Seeking; EOS, Emotion-Oriented Style; RG, reference group; CISS, Coping Inventory for Stressful Situations; STAI, State-Trait Anxiety Inventory; SD, Social Diversion; TOS, Task-Oriented Style.

Table 4. Correlation coefficients between SG officers' scores on STAI and CISS scales

| Variable | TOS | EOS | AS | DS | SD |
|-----------------------|-----------------------|----------------------|----------------------|----------------------|----------------------|
| $X-1$ (State Anxiety) | -0.724 $p < 0.001$ | 0.604 $p = 0.005$ | -0.124 ns (0.600) | 0.1905 ns (0.421) | -0.433 $p = 0.05$ |
| $X-2$ (Trait Anxiety) | -0.593 $p = 0.006$ | 0.726 $p < 0.001$ | -0.049 ns (0.837) | 0.276 ns (0.238) | -0.496 $p = 0.02$ |

AS, Avoidant Style; CISS, Coping Inventory for Stressful Situations; DS, Distraction Seeking; EOS, Emotion-Oriented Style; SD, Social Diversion; SG, study group; STAI, State-Trait Anxiety Inventory; TOS, Task-Oriented Style.

Table 5. Stepwise multiple regression of RG officers' scores (STAI and CISS scales)

| Variables | β | SE of β | Standard B (β) | SE of B (β) | t (57) | p |
|-----------------------|---------|---------------|--------------------------|-----------------------|----------|------------|
| $X-1$ (State Anxiety) | 0.213 | 0.151 | 0.219 | 0.155 | 1.411 | ns (0.163) |
| $X-2$ (Trait Anxiety) | 0.482 | 0.151 | 0.682 | 0.214 | 3.189 | 0.002 |

CISS, Coping Inventory for Stressful Situations; STAI, State-Trait Anxiety Inventory.

each regression equation but only in few cases turned out to be significant explanatory variables for a specific style of coping with stress.

Table 5 shows that trait anxiety ($X-2$) appeared to be a significant explanatory variable for the EOS ($\beta = 0.482$, $p = 0.02$) for officers in the RG; those variables were also positively correlated in the correlation analysis.

Table 6 shows that, in the SG, state anxiety ($X-1$) proved significant, but with a negative sign, for the TOS ($\beta = -0.675$, $p = 0.02$) and correlation between those two variables was also negative. In turn, trait anxiety ($X-2$) appeared a significant explanatory variable for the EOS ($\beta = 0.657$, $p = 0.02$); the correlation analysis also indicated positive correlation between those variables.

Discussion

Since literature offers a scarce number of studies into relationships between anxiety experienced by officers working with dangerous prisoners and styles of

coping with stress they adopt, it will be difficult to refer to results of other studies.

Unlike results of some other studies (cf. 7), this study indicated that officers in the SG fell victim not only to verbal but also physical aggression of prisoners; this is consistent with other research results (cf. 1,2).

Based on received results of the study, it can be stated that experienced state and trait anxiety does not necessarily differ in its intensity from that felt by the general population, although security department officers perform especially difficult tasks, which is particularly the case for the SG officers. However, some other studies showed that prison officers suffer from anxiety (34–36). Maybe the experience of occupational stress is more strongly attributed to the levels of anxiety experienced by prison officers than to their experiences of critical incidents alone (4).

It does not seem to be coincidental that anxiety felt by officers in the SG is more intense than anxiety felt by officers in the RG: direct contact and work with prisoners assigned the 'dangerous' status is a stronger

Prison officers, anxiety and coping with stress – dangerous prisoners

Table 6. Stepwise multiple regression of SG officers' scores (STAI and CISS scales)

| Dependent variable: Task-Oriented Style (TOS) | | | | | | |
|--|---------|---------------|---------------------|------------------|---------|------------|
| Coefficient of multiple regression ($R = 0.725$) | | | | | | |
| Coefficient of determination ($R^2 = 0.525$) | | | | | | |
| Corrected determination coefficient (adjusted $R^2 = 0.469$) | | | | | | |
| Significance of the regression equation $F(2, 37) = 9.400$; $p < 0.004$ | | | | | | |
| SE of the estimate: 5.909 | | | | | | |
| Variables | β | SE of β | Standard $B(\beta)$ | SE of $B(\beta)$ | $t(37)$ | p |
| X-1 (State Anxiety) | -0.675 | 0.270 | -0.809 | 0.323 | -0.497 | 0.02 |
| X-2 (Trait Anxiety) | -0.062 | 0.270 | -0.084 | 0.364 | -0.231 | ns (0.820) |
| Dependent variable: Emotion-Oriented Style (EOS) | | | | | | |
| Coefficient of multiple regression ($R = 0.728$) | | | | | | |
| Coefficient of determination ($R^2 = 0.530$) | | | | | | |
| Corrected determination coefficient (adjusted $R^2 = 0.475$) | | | | | | |
| Significance of the regression equation $F(2, 37) = 9.594$; $p < 0.001$ | | | | | | |
| SE of the estimate: 6.272 | | | | | | |
| Variables | β | SE of β | Standard $B(\beta)$ | SE of $B(\beta)$ | $t(37)$ | p |
| X-1 (State Anxiety) | 0.088 | 0.269 | 0.113 | 0.344 | 0.328 | ns (0.746) |
| X-2 (Trait Anxiety) | 0.657 | 0.268 | 0.946 | 0.387 | 2.444 | 0.02 |

Table 7. The rank order of coping styles of both groups

| Rank | SG | RG |
|------|-------------|-------------|
| 1 | DS* (5.900) | SD* (6.067) |
| 2 | AS* (5.600) | AS* (5.750) |
| 3 | SD* (5.200) | DS* (5.683) |
| 4 | TOS (4.950) | TOS (5.533) |
| 5 | EOS (4.150) | EOS (3.467) |

AS, Avoidant Style; DS, Distraction Seeking; EOS, Emotion-Oriented Style; RG, Reference Group; SD, Social Diversion; SG, Study Group; TOS, Task-Oriented Style.

*AS can take two forms: DS and SD.

stressor and arouses a stronger feeling of threat; as a matter of fact, we could see that those officers are objects of physical and verbal aggression of dangerous prisoners. It is worth noticing, however, that they significantly stronger feel state rather than trait anxiety, which means that anxiety felt stronger by officers in the SG is not a permanent psychophysical disposition but a state, that is, a temporary response to an event, for example, a threat made by a dangerous prisoner. In other studies, a higher level of anxiety in all prison officers, not only in such a selected group was found (34–36).

As mentioned above, coping with work-related stress by prison officers has received limited attention (14,37), especially the relationship between anxiety and style of coping with stress; the authors found very little research exploring coping styles among prison officers.

When analysing the rank order of styles of coping with stress (Table 7), it can be observed that officers in both the groups prefer the AS most, second comes the TOS and last the EOS; in the RG there are only

slight differences between the TOS and AS and thus, it can be stated that those results correspond with results received in other studies (30) on security officers. Preferring the TOS to EOS by prison officers was found also in another study (38), however, the scores on both styles were found to be lower than those in our study; police (not prison) officers also preferred the TOS to EOS (39). Different preferences with regard to SD and DS in our study may suggest that officers in the RG cope with stress mainly through SD, hence using social support, while officers in the SG seek distraction such as thinking about other, pleasant things, sleep, etc. while trying to somehow forget about a difficult issue or escape from it even for a short time. Irrespective, however, of the form, officers in both the groups cope with stress by adopting, first and foremost, the AS: they avoid thinking about, being affected by or experiencing a stressful situation. In other words, the AS is a prevailing style of coping with stress in both the groups.

When examining differences in adopted styles, it can be observed that officers in the RG show stronger tendencies toward taking actions and making efforts aimed at solving a problem (TOS), for example, through cognitive transformation or attempts at changing the situation, than officers in the SG. Data from another study revealed that a majority of respondents not working with dangerous prisoners engaged in problem-focus coping (37). Officers in the RG also, to a larger degree, seek for SD, which may perform certain adoptive functions in the form of using social support. Similar results were received in others studies (40) where it was observed that the most common style of coping with stress in

representatives of uniformed services (in general) was meeting friends; therefore, the style of coping with stress prevailing among officers in the RG is the style commonly adopted by representatives of uniformed services in general and not necessarily by officers in the SG. It was found that police officers also applied SD, for example, by talking to someone about a stressful event (41). In turn, officers in the SG show stronger tendencies toward focusing on themselves, on their own emotional experiences (such as anger, tension etc.), which is aimed at reducing emotional tension that arises from a stressful situation.

In the RG, anxiety as a state ($X-1$), that is, a temporary emotional response to a situation or event, and as a trait ($X-2$), that is, a relatively constant disposition, are associated with focusing on oneself and one's own unpleasant emotional experiences (EOS). On the other hand, state anxiety ($X-1$) is associated with a tendency toward avoiding thinking about or experiencing a stressful situation (AS), and in particular with DS such as watching television, overeating, thinking about something pleasant, etc. In other words, state and trait anxiety makes officers in the RG focus on their own emotional experiences in order to cope with a stressful situation; while state anxiety makes them try to avoid the stress through undertaking other, temporarily pleasant, actions.

On the other hand, in the SG, anxiety as a state ($X-1$) and anxiety as a trait ($X-2$) are negatively correlated with a tendency toward undertaking actions or tasks in order to solve a problem (TOS) and avoiding the problem through SD, that is, seeking for social support (SD). That means that anxiety makes officers in the SG not undertake tasks and actions or the so-called interpersonal exchange in order to cope with stress. In turn, both types of anxiety are positively correlated with focusing on one's own, unpleasant emotional experiences. In other words, anxiety as a temporary response and relatively constant disposition causes officers in the SG not to undertake actions and attempts to solve a problem (TOS) and to avoid SD in order to solve a problem.

Similar relationships were found in the general population: positive correlations of anxiety with the EOS, and negative correlations of anxiety with the TOS and SD (29). Paradoxically, the type of relationships in the general population is more similar to the type of relationships in the SG (where an objectively greater risk and subjectively stronger feeling of situation-related anxiety occur) than in the RG (where both the variables have a lower intensity). Therefore, a question arises: did, nevertheless, officers in the SG develop mechanisms and strategies of similar effectiveness to those of the general population?

Forward multiple regression confirmed a part of the relationships revealed earlier in the correlation analysis. In the RG, anxiety as a constant psychophysical disposition ($X-2$) makes officers focus on their own unpleasant emotional experiences (EOS) in order to reduce emotional tension connected with a stressful situation. In the SG, anxiety as a temporary emotional response ($X-1$) makes officers not undertake actions aimed at solving a problem (TOS); on the other hand, anxiety as a relatively constant disposition ($X-2$) makes them focus on their own emotional experiences in order to rather reduce emotional tension (EOS), which is actually similar to what is observed in officers in the RG. In one of the few conducted research studies on anxiety and styles of coping with stress among employees of the fire service, emergency medical service and police prevention branches similar relationships were found: increased disposition to respond with anxiety reflected by a higher score on the trait-anxiety scale is important for more emotional coping with stress; it can be inferred from the context that the relationship probably occurs in the whole studied population and not in a specific professional group (42).

The issue of positive relationships between anxiety and the EOS and negative relationships between anxiety and TOS is interesting; it is very likely that anxiety as an unpleasant emotion may disturb the course of cognitive processes (attention, thinking, etc.). It is possible that an individual who feels anxiety has to assign more psychological resources (mental as well as cognitive) to identifying what is going on in himself or herself and, in consequence, he or she can use fewer resources to solve a problem.

Another important issue is SD. Officers in the SG seek for SD less than officers in the RG and, in their case, SD, as a manner of coping with stress, correlates negatively with anxiety as a temporary emotional response ($X-1$) and constant disposition ($X-2$). According to some authors, that style may perform adaptive functions because individuals, that is, officers in the RG, use social support. On the other hand, avoiding that style by officers in the SG may be an attempt at protecting others, especially the close ones, against events or information that would burden or even overburden them.

Therefore, psychological counselling may be needed, for example, anti-stress activities or effective therapies mitigating effects of stress that should be provided to both warders working with dangerous prisoners and all the other officers of the Prison Service.

Prison officers, especially the very front-line ones, may benefit from training programmes aimed at recognising potential dangers on the job without

incorporating these concerns as major occupational stressors; their empowerment would increase their sense of control and consequently reduce work-related stress (16).

Recapitulating the above findings one can state that the studied population of Prison Service officers working with dangerous prisoners (SG) differs significantly in parameters of anxiety and styles of coping with stress from the group of officers not working with dangerous prisoners (RG). Assessment of anxiety experiences indicated that officers in the SG feel anxiety as a state, that is, a temporary emotional response ($X-1$), stronger than officers in the RG. As for coping with stress, it was observed that officers in the SG prefer the EOS more than officers in the RG, while officers in the RG prefer the TOS and SD more. As for relationships between anxiety and styles of coping with stress, it was observed that state anxiety ($X-1$) is a variable negatively explaining the TOS in officers in the SG, whereas trait anxiety ($X-2$) is a variable explaining the EOS in both the groups of officers, that is, RG and SG. Results of the study seem to suggest the need for psychological and psychotherapeutic support in the group of officers working with dangerous prisoners or periodic changes of their workplace. Understanding the structure and intensiveness of anxiety (state/trait) experienced by officers working with dangerous prisoners and styles of coping with stress they adopt will allow for better psychological prevention and intervention methods as well as therapeutic efforts.

Acknowledgements

K. Tsirigotis is the co-author of query in the international literature, concepts, hypotheses, principles, methods, debate, implementation of research, calculation, interpretation and discussion of results and manuscript, and the author of database, statistical calculations and preparation of the manuscript. W. Gruszczyński is the co-author of concepts, hypotheses, principles, methods, debate, interpretation and discussion of results and manuscript. S. Pęczkowski is the co-author of query in the literature, concepts, hypotheses, principles, methods, debate, implementation of research, calculation, interpretation and discussion of results and manuscript.

Financial Support

This research received no specific grant from any funding agency, commercial or not-for-profit sectors.

Conflicts of Interest

None.

Ethical Standards

The authors assert that all procedures contributing to this work comply with the ethical standards of the relevant national and institutional committees on human experimentation and with the Helsinki Declaration of 1975, as revised in 2008.

References

1. MISIS M, KIM B, CHEESEMAN K, HOGAN NL, LAMBERT EG. The impact of correctional officer perceptions of inmates on job stress. *SAGE Open* 2013;1–13; doi: 10.1177/2158244013489695.
2. GUO-YUAN S, SHU H, WEI S, YANG W, LI L, XIAO-SHI Y, LIE W. Prevalence and associated factors of depressive symptoms among Chinese male correctional officers. *Int Arch Occup Environ Health* 2014;**87**:387–395.
3. GHADDAR AH, MATEO I, SANCHEZ P. Occupational stress and mental health among correctional officers: a cross-sectional study. *J Occup Health* 2008;**50**:92–98.
4. BROUGH P, WILLIAMS J. Managing occupational stress in a high-risk industry: measuring the job demands of correctional officers. *Crim Justice Behav* 2007;**34**(4): 555–567.
5. BLACK S. Correctional employee stress and strain. *Corrections Today* 2001;**63**:82–87.
6. MACHEL H. Psychospołeczne uwarunkowania pracy resocjalizacyjnej personelu więziennego [Psychosocial conditions of resocialisation work of prison staff]. Gdańsk, Poland: UG, 2001 (in Polish).
7. MACHEL H, ŻERKO J. Zagrożenie personelu resocjalizacyjnego agresją w zakładach izolacyjnych [The threat of aggression against the resocialisation staff in isolation units]. Kraków, Poland: WSP, 1998 (in Polish).
8. KACZMAREK A. Wybrane aspekty szkolenia zawodowego kadry penitencjarnej [Chosen aspects of professional training of penitentiary staff]. Kalisz, Poland: COSSW, 1998 (in Polish).
9. JĘDRZEJAK K. Konflikty w izolacji więziennej [Conflicts in prison isolation]. Kalisz, Poland: COSSW, 1996; (in Polish).
10. LENCZEWSKA H, MACHEL H. Personel więzienny a zagadnienie patologii instytucji [Prison staff and the issue of institution pathology]. Bydgoszcz, Poland: WSP, 1995 (in Polish).
11. CIOSEK M. Izolacja więzienna. Wybrane aspekty izolacji więziennej w percepcji więźniów i personelu [Prison isolation. Selected aspects of prison isolation in the perception of prisoners and staff]. Gdańsk, Poland: UG, 1993 (in Polish).
12. PRZYBYLIŃSKI S. Więźniowie „niebezpieczni”-ukryty świat penitencjarny [‘Dangerous’ Prisoners-the hidden penitentiary world]. Kraków, Poland: Impuls, 2012 (in Polish).
13. JOHNSON S, COOPER C, CARTWRIGHT S, DONALD I, TAYLOR P, MILLET C. The experience of work related stress across occupations. *J Manag Psychol* 2005;**20**:1–2.
14. TRIPLETT R, MULLINGS JL, SCARBOROUGH KE. Correctional officers: implications from organizational literature. *J Crim Justice* 1996;**24**(4):291–308.

15. KORCZYŃSKI M. Wybrane elementy sytuacji społecznej policjantów a sposoby radzenia sobie w sytuacjach trudnych [Selected elements of the social situation of police officers and ways of coping with difficult situations]. Lublin, Poland: UMCS, 2003 (in Polish).
16. DOWDEN C, TELLIER C. Predicting work-related stress in correctional officers: a meta-analysis. *J Crim Justice* 2004;**32**:31–47.
17. FINNEY C, STERGIPOULOS E, HENSEL J, BONATO S, DEWA CS. Organizational stressors associated with job stress and burnout in correctional officers: a systematic review. *BMC Public Health* 2013;**13**:82; doi:10.1186/1471-2458-13-82.
18. BOURBONNAIS R. Work characteristics and health of correctional officers. *Rev Epidemiol Sante Publique* 2005;**53**:127–142.
19. PRZYBYLIŃSKI S. Podkultura więzienna-wielowymiarowość rzeczywistości penitencjarnej [The prison subculture-the multidimensionality of penitentiary reality]. Kraków, Poland: Impuls, 2005 (in Polish).
20. COOPER CL, MARSHALL J. Occupational sources of stress: a review of the literature relating to coronary heart disease and mental ill health. *J Occup Psychol* 1976;**49**:11–28.
21. CULLEN FT, LINK BG, WOLFE NT, FRANK J. The social dimensions of correctional officer stress. *Justice Q* 1985;**2**: 505–533.
22. SELYE H. The stress of life. New York, Toronto, London: McGraw-Hill, 1956.
23. HESZEN-NIEJODEK I. Człowiek w sytuacji stresu. Problemy teoretyczne i metodologiczne [Man in the situation of stress. Theoretical and methodological problems]. Katowice, Poland: UŚ, 1996 (in Polish).
24. LAZARUS RS, FOLKMAN S. Stress, appraisal, and coping. New York: Springer-Verlag, 1984.
25. OGIŃSKA-BULIK N. Stres zawodowy w zawodach usług społecznych [Occupational stress in social service professions]. Warszawa, Poland: Difin, 2006 (in Polish).
26. SPIELBERGER CD. State-trait anxiety inventory: a comprehensive bibliography. Palo Alto, CA, USA: Consulting Psychologists Press, 1989.
27. SOSNOWSKI T, WRZEŚNIEWSKI K, JAWOROWSKA A, FECENEC D. Inwentarz Stanu i Cechy Lęku STAI [State-Trait Anxiety Inventory, STAI]. Warszawa, Poland: Pracownia Testów Psychologicznych Polskiego Towarzystwa Psychologicznego, 2011 (in Polish).
28. ENDLER NS, PARKER JDA. Assessment of multidimensional coping: task, emotion and avoidance strategies. *Psychol Assess* 1994;**6**:50–60.
29. STRELAU J, JAWOROWSKA A, WRZEŚNIEWSKI K, SZCZEPANIAK P. CISS-Kwestionariusz Radzenia Sobie w Sytuacjach Stresowych [CISS-Coping Inventory for Stressful Situations]. Warszawa, Poland: Pracownia Testów Psychologicznych Polskiego Towarzystwa Psychologicznego, 2005 (in Polish).
30. OGIŃSKA-BULIK N, JUCZYŃSKI Z. Osobowość, stres a zdrowie [Personality, stress and health]. Warszawa, Poland: Difin, 2008 (in Polish).
31. GARBARINO S, CUOMO G, CHIORRI C, NICOLA MAGNAVITA N. Association of work-related stress with mental health problems in a special police force unit. *BMJ Open* 2013;**3**: e002791, doi:10.1136/bmjopen-2013-002791.
32. WEBSTER JH. Police officer perceptions of occupational stress: the state of the art. *Policing: An International Journal of Police Strategies & Management* 2013;**36**:636–652.
33. StatSoft Polska. Statistica PL. Kraków, Poland: StatSoft, 2011.
34. FINN P. Correctional officer stress: a cause for concern and additional help. *Fed Probation* 1998;**62**:65–75.
35. ADWELL S, MILLER L. Occupational burnout. *Corrections Today* 1985;**47**:70–72.
36. CHEEK F, MILLER M. The experience of stress for correction officers: a double-bind theory of correctional stress. *J Crim Justice* 1983;**11**:105–120.
37. REGAN S. Occupational stress and coping among Irish prison officers: an exploratory examination. Ireland (Galway-Sligo): Greenhouse Press, 2009.
38. CIESLAK R, KORCZYŃSKA J, STRELAU J, KACZMAREK M. Burnout predictors among prison officers: the moderating effect of temperamental endurance. *Pers Individ Dif* 2008;**45**:666–672.
39. BIGGAM FH, POWER KG, MACDONALD RR. Coping with the occupational stressors of police work: a study of Scottish Officers. *Stress Med* 1997;**13**:109–115.
40. GACEK M. Aktywność fizyczna w stylu życia mężczyzn zatrudnionych w policji-z uwzględnieniem jej roli w redukcji stresu psychologicznego [Physical activity in the lifestyle of men employed in the police-with regard to its role in reducing psychological stress]. *Problemy Higieny i Epidemiologii* 2007;**88**:370–375 (in Polish).
41. PATTERSON GT. Examining the effects of coping and social support on work and life stress among police officers. *J Crim Justice* 2003;**31**:215–226.
42. BORYS B, MAJKOWICZ M, MAJKOWICZ H. Radzenie sobie ze stresem w różnych grupach służb ratowniczych [Coping with stress in various groups of rescue services]. *Psychiatria Polska* 2003;**2**:337–348. (in Polish, with abstract in English).

Legislation

- Regulation of the Minister of Justice of 31 October 2003 Concerning Methods of Protecting Prison Service Organizational Units.
- Instruction No. 15/10 of the Director-General of the Prison Service of 13 August 2010.
- Order No. 43/2010 of the Director-General of the Prison Service of 13 August 2010 on Determining Methods and Forms of Operation in the Area of Protecting Prison Service Organizational Units.