

Coping with stress and the sense of quality of life in inmates of correctional facilities

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Summary

Aim. The aim of the study was to examine the differences between groups of prison inmates distinguished according to the sense of quality of life in terms of their ways of coping with stress.

Methods. In order to verify the research hypotheses, the following instruments were used: (1) The sense of quality of life Questionnaire (SQLQ) by M. Straś-Romanowska (2007) and (2) the COPE Inventory by Carver, Scheier and Weintraub (1989).

Results. The results of the presented research have confirmed that the ways of coping with stress used by prison inmates are related to the sense of quality of life. This conclusion applies not only to overall sense of quality of life but also to all of its dimensions: psychophysical, psychosocial, personal, and metaphysical one. According to the assumed hypothesis, people with a high level of overall quality of life significantly more often than people with a low level of quality of life prefer active coping strategies, including strategies such as: Active coping, Planning, Searching for instrumental support, Searching for emotional support, Positive revaluation and development. A similar conclusion with minor modifications also applies to other dimensions of quality of life

Conclusions. Thus, the use of constructive ways of coping with stress – based on seeking support, personal activity in coping with problems and drawing conclusions from wrong life decisions – is related to higher level of quality of life.

Key words: coping with stress, quality of life, prison inmates

Introduction

In December 2016, in Polish prisons there were 65,421 inmates, 4,917 pre-trial detainees and 118 penalized persons [1]. Undoubtedly, prison isolation is a stressful situation and coping with stress is one of the key skills that contribute to the success of rehabilitation; it is also of importance to the safety of the staff and inmates of the rehabilitation facility [2].

Prisoners also have to deal with such issues as excess noise, isolation, and boredom [3]. Other sources of stress include dealing with prison rules, expectations of staff and other inmates, and sexual intimidation from other inmates [4]. Inmates may also experience an increase in stress near their release time as they experience uncertainty about the “outside” [5].

Silverman and Vega [6] argue that a prison constitutes a new environment to which a person responds with culture shock. Common sources of stress which the inmate must face include loss of freedom, a high level of violence, conflicts with other residents or staff, lack of privacy, and overcrowding [7]. Similar factors of stress are mentioned by Polish researchers who point to: incidences of violence and aggression [8, 9]; depressed mood [10, 11]; the need to find one’s own position in the prison hierarchy, where the head are people with long sentences and people who develop prison subcultures consisting of a shared system of customs and beliefs [12, 13]; living in a constant sense of threat and inability to anticipate the situation, lack of sense of safety [13].

Malina [14] has conducted research on the range, types, causes and effects of violence and aggression among prisoners. The results of the study revealed that most of the prisoners in each of the detention centers admitted that violence and aggression was applied between convicts, and witnessed violence between convicts. The most common form of violence was economic violence, which is the most common form of violence in closed and semi-open prisons. The second most common occurrence is physical abuse. Prisoners admitted that overcrowding in prisons is a major source of conflicts and violence and aggression among the detainees. This was confirmed by 88 (44%) of the inmates in Herby Penitentiary and 136 (45.3%) in the Wojkowiec Penitentiary. In addition, conflicts are intensified by lack of activity and boredom. Violence and aggression among prisoners results from the need of domination and the tendency to aggression.

The effectiveness of coping with stress depends on situational factors, associated with the specificity of a difficult situation, as well as on personal factors, associated with the personal resources [15]. The important personal resources include the sense of quality of life understood as “an individual’s perception of their position in life in the context of the culture and value systems in which they live, and in relation to their goals, expectations, standards and concerns” [16, p. 1403]. According to this approach, the sense of quality of life encompasses the following domains: physical, psychological, independence, social relationships, environment, and spirituality [17].

Previous research results suggest that imprisonment leads to a decrease in the sense of quality of life [18, 19], but there are no studies concerning the relations between inmates’ styles of coping with stress and their quality of life. The results of available studies concerning inmates’ coping with stress do not clearly indicate which strategies are associated with a greater effectiveness of the coping process.

There is a commonly held view that, with regard to the general population, better adjustment is associated with task-focused coping with stress [20]. Consequently, perceiving the stressors from the environment as a challenge, focusing on task-focused problem solution results in significantly better adaptation to new conditions. In the case of the population of inmates, as mentioned before, research results are ambiguous.

Results of research among prisoners conducted by Van Harreveld et al. [21] indicated that optimism was negatively correlated with indices of psychological stress ($r = -0.43$; $p = 0.02$), depressed mood ($r = -0.38$; $p = 0.04$) and physical well-being ($r = -0.41$; $p = 0.03$). Psychological and physical well-being were expected to be related to the use of emotion-focused coping. Authors of that research project expected that an active, emotion-focused coping strategy would be more effective in reducing negative emotions. Participants were asked what they did to deal with negative feelings. Half of participants ($n = 15$) indicated that they engaged in relatively passive forms of coping, such as wanting to be left alone, trying to shut out any thoughts, and watching television. The remaining 15 participants said they engaged in more active coping strategies, such as talking to fellow inmates or family about their worries/problems or thinking about what they had learned from this experience. On the scale measuring the subjective intensity of emotions (PANAS, The Positive and Negative Affect Schedule), the passive group reported feeling more guilt as compared with the latter group. This former group also reported feeling more fear and being less alert. The participants using a passive coping strategy also reported higher levels of regret [21].

Gullone et al. [22] has tested 81 prisoners (age: 18–73 years). Avoidance of goal-focused coping is significant for anxiety (both state and trait) and subjective quality of life. Emotion-focused coping emerged as the most important predictor particularly for trait anxiety, depression, and self-esteem. Male prisoners are more likely to engage in emotion-focused and avoidance-focused coping behaviors, the former of which is highly likely to maintain their low levels of well-being. The data suggested that prisoners show no signs of returning to normative levels of well-being over time.

Studies by Looman et al. [23] were conducted on a sample of 95 offenders, including 41 sex offenders who had committed crimes against people aged 16 or over, 25 individuals who had committed sex crimes against children aged 12 or younger, and a control group of 29 people (individuals using violence). The authors observed that pedophiles were more willing to use emotion-focused strategies than the remaining groups. Moreover, offenders using violence scored statistically significantly lower than offenders guilty of child sexual abuse, regarding the use of emotion-focused strategies.

Another study, by Cortoni et al. [24], showed that, in coping with stress, abusers and rapists more often use the avoidance strategy and emotion-focused coping styles compared to other types of offenders and to people who are not in conflict with the law.

The use of emotion-focused coping strategies is related to psychological dysfunctions [17, 18]. Sex offenders exhibit a general disposition for ineffective coping [25, 26]. Together with the mediating influence of negative emotional states, this pattern of ineffective coping may facilitate relapse into crime [27, 28]. Thus, the tendency to ineffective coping in sex offenders may lead to a repeated cycle of stressors, ineffective coping, an increase in negative emotional states and further problems.

Based on research, it has also been established that deviant sexual fantasies increase and nondeviant ones decrease in response to conflicts and negative emotional states [29–31]. Cortoni and Marshall [32] concluded that deviant sexual fantasies were a sexual coping style. Sex offenders used real sex, pornography, and sex fantasies involving rape and harassment to cope with stressful situations more often than

nonsex offenders did. Pedophiles used coping strategies involving sexual harassment themes more often than other groups. Rapists and pedophiles did not differ in terms of coping strategies involving rape themes [32]. Sex-related strategy correlates with the emotion-focused avoidance-focused coping style [33].

The study by Mohino et al. [34] revealed that young prison inmates use problem-focused coping strategies more often than avoidance-focused ones. Similarly, they more often use cognitive coping strategies than behavioral ones. In the case of inmates imprisoned for the first time, the emotional discharge strategy is more often used in the first months. With time, the expression of uncontrolled emotions as a way of coping with stress decreases. Positive reappraisal was used significantly less often. Moreover, seeking alternative rewards was a strategy more often used by inmates imprisoned for the first time than by offenders imprisoned again.

The results of the study by Pagé et al. [35], conducted on a sample of 196 young people including sex offenders and their peers who had not committed a crime, showed that – compared to their peers from the control group who had not committed any crime – young sex offenders less often used sex-related strategies as a way of coping in stressful situations, but they used emotion-focused strategies to a greater extent. Additionally, the application of the logistic regression model, which turned out to be significant, revealed an increased probability of correctly identifying sex offenders among young people based on coping strategies used in situations of stress [35]. The results of the study showed that young sex offenders have a tendency to use emotion-focused strategies in coping with life difficulties.

Authors of the article have not found the results of Polish research on the relationship between the quality of life and coping with stress of prisoners. The problem of coping with stress among prisoners was taken up by several Polish researchers. Szymanowska [36] investigated the prisoner's coping with the difficult situation as a result of desirable values threat. The author used the Action Strategy Questionnaire by Ostrowska, consisting of three strategies: attack, resignation and ruthlessness.

Attack strategy is a set of actions, emotional states, beliefs, and opinions that are designed to achieve a clearly defined, important and necessary goal. An individual who applies this strategy is ready to counteract all the adversities that appear on the way to its implementation. Resignation, is a way to solve a task situation that is characterized by more or less conscious suspension of emotional, cognitive and motor processes in context of important values. The person who uses this strategy favors waiting for favorable circumstances, he/she avoids exertion and risky situations, he/she does not cope with stress, he/she has a rather pessimistic view of the world. Finally, the strategy of ruthlessness is related to lack of empathy, failure to take moral norms into account in situations that require decision or solution of conflict, objectification of others, the exploitation of others, egoism.

The results revealed that the highest scores on the scale of the attack were obtained by youth offenders, the lowest by recidivists. On the scale of resignation, the highest scores were obtained by recidivists, but the difference between them and the juveniles was not significant. Significant differences occurred between recidivists and first-time imprisoned adults. According to Szymanowska [36], the preference for choosing a res-

ignation strategy is understandable and can be explained by the fact that they have many negative experiences and therefore seek peace. On the scale of ruthlessness, the young offenders and recidivists scored the highest. Both groups are statistically significantly different from the adult population being held in custody for the first time.

The issues of ecological stress and individual differences in coping with stress among prisoners were undertaken by Terelak and Steckiewicz [37]. The results revealed that male prisoners who have higher level of internal locus of control prefer more task-oriented coping style than prisoners characterized by external locus of control [37].

Interesting research on the adaptation of prisoners was conducted by Niewiadomska and Kalinowski [38], which explored the relationship between adaptation potential and resources. The authors, using the RISB test (The Rotter Incomplete Sentence Blank), distinguished three kinds of adaptation potential: (1) prisoners with low adaptive capacities as a result of experiencing various problems; (2) prisoners with low adaptive potential as a result of intentional motivation locking; and (3) prisoners with high adaptive potential. It turned out that the increase in adaptation of the prisoners is influenced by the experience of material gain, in particular the acquisition of appropriate clothing. Increasing adaptability in prisoners also depends on reducing the loss of material possessions. In addition, the adaptive potential of prisoners of custody is generated by personal capital gains, understood as the ability to make positive family relationships, experiencing the sense of own life and organizational competence [38].

The analysis of the research findings shows that there is little publication on the relationship between the quality of life and coping with stress among prisoners. The lack of such analyses justified undertaking the present study whose aim was to analyze the differences in strategies of coping with stress in a group of inmates characterized by different levels of quality of life.

Material

The aim of the study was to examine the differences between groups of inmates, distinguished according to the quality of life and in terms of their ways of coping with stress.

With this aim in view, the following research problem was formulated: what are the differences in the strategies of coping with stress between groups of inmates distinguished according to the overall quality of life and its specific components? The following research hypothesis was formulated: inmates at correctional facilities characterized by high overall level of quality of life and its specific dimensions significantly more often use constructive strategies of coping with stress than inmates with low overall level of quality of life.

The study included 390 male inmates of correctional facilities administrated by the District Inspectorate of Prison Service in Warsaw, and specifically at the Warsaw-Grochów, Warsaw-Białołęka, Warsaw-Mokotów, and Warsaw-Służewiec Remand Prisons as well as at the Warsaw-Białołęka Penitentiary. Although part of the research was conducted in pre-trial detention centers, only persons who were sentenced took part

in it. Due to the overcrowding of Polish prisons, some prisoners are serving sentences in detention centers. The study was conducted in April 2014.

The age of participants ranged from 19 to 68 years ($M = 35.19$; $SD = 9.65$). Vocational education was declared by 26.7% of the participants, 18.5% declared elementary education, and only 7.7% of the sample were individuals with higher education. The study involved people who were imprisoned repeatedly: 59.2% of respondents began imprisonment in the years 2000–2014, 17.4% of prisoners will end it in 2015, and 14.1% – in 2018–2050.

As many as 76.4% of the participants declared being Roman Catholic, and 12.3% declared no religion; 3.8% of the participants were Protestants and 3.6% were Orthodox Christians. Over 47% of the sample (47.2%) defined themselves as believers and 20% as strong believers. Individuals identifying themselves as weak believers constituted 17.9% and nonbelievers constituted 14.9% of the sample. As many as 71.3% of the participants declared that they engaged in religious practices.

Method

In order to verify the research hypotheses, the following instruments were used: (1) the sense of quality of life Questionnaire (SQLQ) and (2) the COPE Inventory. The criteria for choosing the applied research tools were their good psychometric properties, and in the case of the COPE, the possibility of making further comparisons with foreign studies.

The Sense of Quality of Life Questionnaire

The instrument was developed by Maria Straś-Romanowska, the author of the theory of quality of life defined as satisfaction with one's life experiences combined with their subjective cognitive and emotional assessment. According to this theory, the quality of life has four dimensions: psychophysical, psychosocial, personal, and metaphysical one [39]. The instrument consists of 60 statements, 15 per each dimension.

The reliability of the scale was assessed by computing its absolute stability (the time interval was three weeks). Correlation coefficients between the results of two measurements were the highest in the group of young people (0.81 for the overall score), in the group of elderly people (0.73 for the overall score) and in the group of adults (0.65 for the overall score). The internal consistency of scales was also assessed by computing Cronbach's alpha coefficients, which were as follows: 0.77 for the Psychophysical Sphere scale; 0.71 for the Psychosocial Sphere scale; 0.72 for the Personal Sphere scale; 0.65 for the Metaphysical Sphere scale; and 0.70 for the entire SQLQ.

The construct validity of the SQLQ was assessed by computing the correlations of its scales with other research instruments and by testing intergroup differences. The Psychophysical Sphere scale correlates positively (0.30) with the Somatic Symptoms scale which is part of the General Health Questionnaire (GHQ-28) by David Goldberg [40]; the Psychosocial Sphere scale correlates (0.49) with Tardy's Social Support Scale as

adapted by Kmieciak-Baran [41]; the Personal Sphere scale correlates negatively (-0.28) with the Social Dysfunction scale of the General Health Questionnaire (GHQ-28) developed by Goldberg [40] and positively with Manageability scale included in the Life Orientation Questionnaire (SOC-29) developed by Antonovsky [42] ($r = 0.53$). The Metaphysical Sphere scale correlates positively ($r = 0.40$) with the Meaningfulness subscale of the SOC-29 and negatively ($r = -0.24$) with the Value Crisis Questionnaire (VCQ) by Oleś [43]. All the obtained correlation coefficients confirm the construct validity of the Sense of Quality of Life Questionnaire. An analysis of intergroup differences suggests that there are statistically significant differences between the groups of young people and elderly people on specific dimensions of the sense of quality of life: elderly people score higher on Metaphysical Sphere and lower on the scale measuring the psychophysical dimension of the sense of quality of life. The obtained differences confirm the construct validity of The sense of quality of life Questionnaire.

The COPE Inventory

The inventory was developed by Carver, Scheier and Weintraub [44]. It was adapted into Polish by Juczyński and Ogińska-Bulik [45]. The COPE consists of 60 statements representing 15 strategies, 4 items per strategy. The COPE Inventory measures the following strategies: Active coping; Planning; Use of instrumental social support; Use of emotional social support; Suppression of competing activities; Turning to religion; Positive reinterpretation and growth; Restraint; Acceptance; Focus on and venting of emotions; Denial; Mental disengagement; Behavioral disengagement; Substance use, and Humor.

The reliability of the instrument was measured using internal consistency assessed by computing Cronbach's alpha coefficient. The values of alpha ranged from 0.48 to 0.94. They were the lowest for the Mental disengagement and Active coping strategies and the highest for Turning to religion. We also computed absolute stability coefficients, which ranged from 0.45 to 0.82. The two measurements were performed at an interval of six weeks on a sample of 30 students [44].

The construct validity of the COPE Inventory was assessed – diagnostic validity was confirmed by correlating the results obtained using the COPE Inventory with those obtained using other instruments measuring ways of coping with stress [44]. A high positive correlation was found between Task focus measured using the CISS questionnaire by Endler and Parker and the variables measured using the COPE Inventory: Planning (0.70); Suppression of competing activities (0.64); and Active coping (0.62). A relationship was also found between Emotion-focused strategies (CISS), and Use of emotional social support (0.45). Avoidance style (CISS) correlated positively with Mental disengagement (0.62). Correlations were also tested between the COPE Inventory and Self-efficacy measured using the GSES by Schwarzer. Self-efficacy correlated positively with Active coping (0.42) and negatively with Behavioral disengagement (-0.43). The use of Active coping strategies correlated with higher self-esteem measured using the Rosenberg SES, internal locus of control measured using the Rotter I-E Scale, and anxiety – both trait and state – measured using the Spielberger STAI – the

intensity of anxiety correlates with Use of emotional social support as well as with Focus on and venting of emotions.

Strategies such as Active coping and Planning also correlate positively with fighting spirit attitude (0.46) and negatively with helplessness and anxiety-based preoccupation (-0.44) [44].

Results

The psychophysical dimension turned out to be the highest-rated dimension of the sense of quality of life ($M = 3.06$; $SD = 0.49$). Only slightly less rated ones were the metaphysical dimension ($M = 3.04$; $SD = 0.45$) and the personal dimension of quality of life ($M = 3.02$; $SD = 0.42$). The psychosocial dimension turned out to be the least highly rated quality of life dimension ($M = 2.84$; $SD = 0.41$) (Table 1).

Table 1. Descriptive Statistics for the sense of quality of life and its dimensions ($N = 390$)

Sense of quality of life	M	SD	Min.	Max.
Psychophysical sense of quality of life	3.06	0.49	1.40	4.00
Psychosocial sense of quality of life	2.84	0.41	1.53	3.87
Personal sense of quality of life	3.02	0.42	1.40	4.00
Metaphysical sense of quality of life	3.03	0.45	1.40	4.00
General sense of quality of life	2.99	0.37	1.55	3.85

Raw scores were juxtaposed with the norms specified by the authors of the Sense of Quality of Life Questionnaire. It should be noted that these norms were set on the basis of research conducted on various groups, i.e., adolescents ($N = 93$), adults ($N = 73$), and elderly people ($N = 55$) [45]. Juxtaposing raw scores with norms made it possible to conclude that the mean overall sense of quality of life score and the mean scores on its specific dimensions fall within the norm, though it is worth noting that the most important score, i.e., overall sense of quality of life, – is 42 and thus verges on the bottom limit of the norm.

The analysis of results revealed that the most often used strategies of coping with stress were: Planning ($M = 11.1$; $SD = 2.88$), Active coping ($M = 10.7$; $SD = 2.62$), Use of instrumental social support ($M = 10.5$; $SD = 2.83$), Positive reinterpretation and growth ($M = 10.5$; $SD = 2.70$), and Suppression of competing activities ($M = 10.4$; $SD = 2.56$) (Table 2).

Table 2. Descriptive statistics for strategies of coping with stress ($N = 390$)

Specification	M	SD	Min.	Max.
Active coping	10.7	2.62	4	16
Planning	11.1	2.88	4	16
Use of instrumental social support	10.5	2.83	4	16
Use of emotional social support	9.8	2.83	4	16

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Suppression of competing activities	10.4	2.56	4	16
Turning to religion	8.2	3.34	4	16
Positive reinterpretation and growth	10.5	2.70	4	16
Restraint	9.9	2.42	4	16
Acceptance	9.7	2.69	4	16
Focus on and venting of emotions	9.8	2.59	4	16
Denial	7.9	2.83	4	16
Mental disengagement	8.6	2.45	4	16
Behavioral disengagement	7.6	2.68	4	16
Substance use	7.8	3.47	4	16
Humor	7.9	2.82	4	16

The coping strategies least often used by prison inmates were: Behavioral disengagement ($M = 7.6$; $SD = 2.68$), Substance use ($M = 7.8$; $SD = 3.47$), Denial ($M = 7.9$; $SD = 2.83$), and Humor ($M = 7.9$; $SD = 2.82$).

The next stage of analysis was the computing of differences between groups of inmates distinguished according to the quality of life. For this purpose, we used the norms for each dimension of quality of life, set by the author of the SQLQ [45]. Three groups of inmates were distinguished, with different levels of overall sense of quality of life and its specific dimensions. The first group was composed of individuals with a high sense of quality of life, the second group – with an average sense of quality of life, and the third group – with a low level of this variable.

We performed analysis of variance (ANOVA) and two types of *post hoc* tests: the Hochberg GT2 test and the Games–Howell test. Both tests are used in the case of groups differing in size. The first one is used when the assumption of variance homogeneity is satisfied, whereas the second one is applied when data do not meet this assumption.

Overall quality of life and strategies of coping with stress

It turned out that individuals exhibiting a high level of overall quality of life preferred the following strategies significantly more often than individuals with a low level of this variable: Active coping ($F = 34.32$; $p < 0.001$), Planning ($F = 47.38$; $p < 0.001$), Use of instrumental social support ($F = 12.92$; $p < 0.001$), Use of emotional social support ($F = 17.82$; $p < 0.001$), Suppression of competing activities ($F = 15.37$; $p < 0.001$), Positive reinterpretation and growth ($F = 33.34$; $p < 0.001$), and Restraint ($F = 3.61$; $p < 0.05$).

As regards people with a low overall quality of life, they significantly more often used strategies of Denial ($F = 20.10$; $p < 0.001$), Mental disengagement ($F = 6.92$; $p < 0.01$), Behavioral disengagement ($F = 24.88$; $p < 0.001$), Substance use ($F = 29.20$; $p < 0.001$), and Humor ($F = 13.01$, $p < 0.001$) (Table 3).

Table 3. Differences in the ways of coping with stress between groups with different levels of overall quality of life: low (1), average (2) and high (3)

Specification		N	M	SD	F	p	Post hoc
Active coping	low (1)	151	9.44	2.73	34.32	0.0001	Games–Howell Test (1) < (2) (1) < (3)
	average (2)	194	11.33	2.28			
	high (3)	45	12.08	1.86			
	Total	390	10.69	2.62			
Planning	low (1)	151	9.53	2.67	47.38	0.0001	GT2 Hochberg Test (1) < (2) (1) < (3) (2) < (3)
	average (2)	194	11.87	2.52			
	high (3)	45	12.91	2.55			
	Total	390	11.08	2.88			
Use of instrumental social support	low (1)	151	9.67	2.79	12.92	0.0001	GT2 Hochberg Test (1) < (2) (1) < (3)
	average (2)	194	10.79	2.75			
	high (3)	45	11.78	2.57			
	Total	390	10.47	2.83			
Use of emotional social support	low (1)	151	8.89	2.59	17.82	0.0001	GT2 Hochberg Test (1) < (2) (1) < (3) (2) < (3)
	average (2)	194	10.15	2.79			
	high (3)	45	11.40	2.81			
	Total	390	9.81	2.83			
Suppression of competing activities	low (1)	151	9.58	2.70	15.37	0.0001	Games–Howell Test (1) < (2) (1) < (3)
	average (2)	194	10.86	2.32			
	high (3)	45	11.40	2.31			
	Total	390	10.43	2.56			
Turning to religion	low (1)	151	7.97	3.13	1.47	0.231	n.s.
	average (2)	194	8.19	3.48			
	high (3)	45	8.95	3.85			
	Total	390	8.19	3.40			
Positive reinterpretation and growth	low (1)	151	9.28	2.49	33.34	0.0001	GT2 Hochberg Test (1) < (2) (1) < (3) (2) < (3)
	average (2)	194	11.01	2.45			
	high (3)	45	12.27	2.77			
	Total	390	10.49	2.70			
Restraint	low (1)	151	9.57	2.54	3.61	0.028	GT2 Hochberg Test (1) < (3)
	average (2)	194	10.10	2.25			
	high (3)	45	10.53	2.56			
	Total	390	9.95	2.41			

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Acceptance	low (1)	151	9.32	2.60	3.20	0.042	GT2 Hochberg Test (1) < (2)
	average (2)	194	9.99	2.65			
	high (3)	45	10.15	3.03			
	Total	390	9.75	2.69			
Focus on and venting of emotions	low (1)	151	9.58	2.61	.95	0.389	n.s.
	average (2)	194	9.94	2.55			
	high (3)	45	9.58	2.69			
	Total	390	9.76	2.59			
Denial	low (1)	151	8.89	2.58	20.10	0.0001	Games–Howell Test (1) > (2) (1) > (3) (2) > (3)
	average (2)	194	7.47	2.91			
	high (3)	45	6.33	2.09			
	Total	390	7.89	2.83			
Mental disengagement	low (1)	151	9.07	2.44	6.92	0.001	GT2 Hochberg Test (1) > (3)
	average (2)	194	8.47	2.51			
	high (3)	45	7.58	2.31			
	Total	390	8.60	2.50			
Behavioral disengagement	low (1)	151	8.63	2.60	24.88	0.0001	GT2 Hochberg Test (1) > (2) (1) > (3) (2) > (3)
	average (2)	194	7.29	2.53			
	high (3)	45	5.82	2.24			
	Total	390	7.64	2.68			
Substance use	low (1)	151	9.23	3.22	29.20	0.0001	GT2 Hochberg Test (1) > (2) (1) > (3) (2) > (3)
	average (2)	194	7.11	3.32			
	high (3)	45	5.62	2.95			
	Total	390	7.76	3.47			
Humor	low (1)	151	8.75	2.67	13.01	0.0001	GT2 Hochberg Test (1) > (2) (1) > (3)
	average (2)	194	7.47	2.79			
	high (3)	45	6.84	2.67			
	Total	390	7.89	2.82			

n.s. – not significant

Psychophysical quality of life and strategies of coping with stress

Inmates characterized by a high level of psychophysical quality of life significantly more often used the following strategies of coping with stress: Active coping ($F = 17.78$; $p < 0.001$), Planning ($F = 20.80$; $p < 0.001$), Use of emotional social support

($F = 5.91$; $p < 0.01$), Suppression of competing activities ($F = 8.27$; $p < 0.001$), and Positive reinterpretation and growth ($F = 16.25$; $p < 0.001$).

Individuals characterized by a low sense of quality of life significantly more often chose coping strategies such as Denial ($F = 21.66$; $p < 0.001$), Mental disengagement ($F = 7.11$; $p < 0.01$), Behavioral disengagement ($F = 25.87$; $p < 0.001$), Substance use ($F = 23.73$; $p < 0.001$), and Humor ($F = 3.78$; $p < 0.05$).

Psychosocial quality of life and strategies of coping with stress

Differences in the choice of strategies of coping with stress between groups distinguished according to the psychosocial sense of quality of life mostly turned out to be statistically significant.

Individuals with a high psychosocial sense of quality of life used the strategies of Active coping ($F = 20.63$; $p < 0.001$), Planning ($F = 35.46$; $p < 0.001$), Use of instrumental social support ($F = 10.44$; $p < 0.001$), Use of emotional social support ($F = 19.10$; $p < 0.001$), Suppression of competing activities ($F = 10.48$; $p < 0.001$), Positive reinterpretation and growth ($F = 16.13$; $p < 0.001$), and Restraint ($F = 3.30$; $p < 0.05$) significantly more often than those with a low sense of quality of life. Also, individuals with a high psychosocial sense of quality of life significantly less often used strategies such as Denial ($F = 7.20$; $p < 0.01$), Behavioral disengagement ($F = 13.67$; $p < 0.001$), Substance use ($F = 20.65$; $p < 0.001$), and Humor ($F = 6.64$; $p < 0.01$).

Personal quality of life and strategies of coping with stress

ANOVA revealed statistically significant differences in the use of particular strategies of coping with stress also between inmates with a low vs. high personal sense of quality of life. Individuals with a high personal quality of life (compared to those with a low level of this variable) significantly less often used the following strategies: Active coping ($F = 25.58$; $p < 0.001$), Planning ($F = 29.35$; $p < 0.001$), Use of instrumental social support ($F = 4.89$; $p < 0.01$), Use of emotional social support ($F = 8.79$; $p < 0.001$), Suppression of competing activities ($F = 7.62$; $p < 0.01$), Positive reinterpretation and growth ($F = 23.47$; $p < 0.001$), and Acceptance ($F = .65$; $p < 0.05$).

Moreover, inmates with a high personal quality of life significantly less often used the strategies of Denial ($F = 13.82$; $p < 0.001$), Mental disengagement ($F = 4.76$; $p < 0.01$), Behavioral disengagement ($F = 13.52$; $p < 0.001$), Substance use ($F = 16.99$; $p < 0.001$), and Humor ($F = 5.17$; $p < 0.01$).

Metaphysical quality of life and strategies of coping with stress

Prison inmates with a high metaphysical quality of life significantly more often chose the following strategies of coping with stress: Active coping ($F = 28.57$; $p < 0.001$), Planning ($F = 43.19$; $p < 0.001$), Use of emotional social support ($F = 14.10$; $p < 0.001$), Suppression of competing activities ($F = 21.02$; $p < 0.001$), Turning to

religion ($F = 11.93$; $p < 0.001$), Positive reinterpretation and growth ($F = 36.09$; $p < 0.001$), and Restraint ($F = 5.54$; $p < 0.01$).

In contrast, inmates with a low metaphysical quality of life significantly more often used strategies such as Denial ($F = 6.69$; $p < 0.001$), Behavioral disengagement ($F = 8.67$; $p < 0.001$), Substance use ($F = 14.27$; $p < 0.001$), and Humor ($F = 8.46$; $p < 0.001$).

Conclusions

The results of the presented research have confirmed that the ways of coping with stress used by prison inmates are related to quality of life. This conclusion applies not only to overall sense of quality of life but also to all of its dimensions: psychophysical, psychosocial, personal, and metaphysical one.

According to the hypothesis, individuals with a high level of overall quality of life prefer active strategies of coping with stress significantly more often than people with its low level. These strategies include Active coping, Planning, Use of instrumental social support, Use of emotional social support, or Positive reinterpretation and growth. With slight modifications, a similar conclusion applies to other dimensions of quality of life as well. Thus, the use of constructive ways of coping with stress – based on seeking support, personal activity in coping with problems, and drawing conclusions from wrong life decisions – is related to higher level of quality of life. In other words – the more satisfied a person is with his or her life, the more often he or she adopts an active attitude in coping with difficulties.

The results of the present study are consistent with the existing findings – the role of social support as an effective strategy of coping with stress has been highlighted by other researchers [46–48]. A person capable of reflection on their own life and capable of treating their term in prison as a chance for development in a way accepts the situation he/she is in. Research results [46] revealed that the Acceptance strategy prevents internalizing disorders and may thereby contribute to improving inmates' quality of life.

On the other hand, people with a high overall sense of quality of life also use strategies such as Suppression of competing activities and Restraint, which seem to have a passive rather than active character. Both of these strategies involve the abandonment of action in a situation that is judged as not leading to problem solution and as remaining beyond the individual's control. It seems that the reality of prison life abounds in situations beyond the inmates' control, and – as the literature demonstrates – in uncontrolled situations avoidance-oriented strategies are more often used and more effective [49, 50]. Perhaps, then, by reducing the personal control on the part of its inmates, a total institution [51] such as a correctional facility demands using also avoidance-oriented strategies in some situations – for example, in the case of conflicts with fellow inmates.

Strategies such as: Denial, Mental disengagement, Restraint, Substance use, or Humor were significantly more often chosen by people with a low overall sense of quality of life. A similar tendency can be observed in the case of specific quality of life

dimensions as well. These strategies can also be regarded as avoidance-oriented, but the difference between them and the passive coping behaviors lies in the fact that they involve a smaller degree of conscious decision on the individual's part and the actions taken resemble defense mechanisms to a greater extent. The obtained results turned out to be consistent with those of previous studies [52, 53], in which it was found that the Denial strategy was related to a high level of symptoms of internalizing behavior disorders – that is, to worse adjustment. The mentioned strategies, i.e., Denial, Mental disengagement, Behavioral disengagement, Substance use, and Humor, undoubtedly carry an emotional undertone.

The results of the present study largely reflect previous research results [23, 24], pointing to a significantly more frequent use of emotion-focused strategies by those inmates who have committed sex crimes in the past. However, the results of the present study are not consistent with those obtained by Mohino, Kirchner, and Forns [34], which revealed that young prison inmates use problem-focused coping strategies more often than avoidance-focused ones. In the present research project, the sample was composed of adult prison inmates – perhaps it is the age variable that is responsible for the divergence in results.

An interesting result was obtained with regard to metaphysical sense of quality of life – individuals with a high level of this variable more often chose the strategy of Turning to religion. This seems understandable given the essence of the metaphysical dimension of quality of life, highlighting the role of values and spirituality. Besides the obtained result is consistent with the studies conducted to date, which confirmed that, in coping with stress, inmates use religious strategies as well [54–56].

The analysis of the obtained results made it possible to conclude that the sense of quality of life in inmates of correctional facilities is within the norm. This applies to overall sense of quality of life as well as to its specific dimensions. This finding is different from those of previous studies, which showed that imprisonment contributes to a decrease in the sense of quality of life [10, 18]. Perhaps this provides evidence to good imprisonment conditions, comprising several elements: organization, staff, accommodation, etc.; however, this point requires further scientific exploration.

The highest-rated dimension of the sense of quality of life turned out to be the psychophysical dimension, followed by the metaphysical and personal dimensions. The lowest-rated one was the psychosocial dimension. Imprisonment is tantamount to social ostracism for forbidden acts. It is therefore not surprising that prison inmates score the lowest on psychosocial quality of life, which is associated with the sense of belonging, security, and social identity as well as with establishing and maintaining bonds with other people, which in turn allows a person to dispel the sense of loneliness and to experience acceptance. Besides, people serving their sentences in correctional facilities are deprived of permanent contact with their closest family, which may also contribute to lowering their psychosocial sense of quality of life.

People using constructive coping strategies more often succeed in solving the problems they encounter, and this translates into better adaptation and higher sense of quality of life. In the light of the obtained results, a conclusion can also be formulated concerning the reverse relationship – namely, that more constructive strategies of coping

with stress are used by people with a higher sense of quality of life. Perhaps a kind of feedback mechanism is at work here – individuals satisfied with their lives cope in more adaptive ways, which in turn enhances their sense of quality of life. It would be interesting to conduct longitudinal research in order to test this hypothesis.

The accumulation of stress is not conducive to adaptation [46], hence the immense role of coping strategies. A person in a situation of imprisonment is not capable of dissociating him-/herself from the sources of stress that are associated with the very fact of imprisonment and isolation. Still, what seems to be modifiable is the work on effective ways of coping with stress, which researchers believe to be among the skills that are crucial to the success of rehabilitation and social adjustment [2].

Summing up, the research results presented in this article provide support in favor of supplementing intervention programs for offenders serving prison sentences at correctional facilities with elements developing the skills of coping with stress, which may be the factor decisive to success in their adaptation to life and return to society.

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