



Research Article

Humor and Expression of Anger in Socially Maladapted Youth

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Received: 30 September 2021; **Revised:** 22 November 2021; **Accepted:** 24 November 2021

Abstract: Appropriate regulation of emotions is important for maintaining physical and psychological health and well-being, as well as social adaptation and development. In the prevention of social maladjustment, it is particularly important to support factors that contribute to the proper control of emotions, especially anger. One such factor is humor, which helps to relieve emotional tension and express anger in a safe way. This research aims to identify the types of anger expression occurring in adolescents who are socially maladapted and determine whether there are significant differences in the use of humor between (sub)groups of minors due to their type of anger expression. The study was carried out in twenty-four juvenile correctional institutions in Poland and included a sample of 705 minors (29% females and 71% males, aged between 12 and 21 years old, with an average age of 17). Two research tools were used: the Anger Expression Scale (AES) and the Humor Style Questionnaire (HSQ). K-means cluster analysis led to the separation of three types of anger expression in the group of socially maladjusted youth: Anger-out, Low-Anger, and Anger-control. Analysis of Variance (ANOVA) analysis revealed the statistically significant differences between the groups of minors (clusters) in their use of three styles of humor: affiliative, self-enhancing, and aggressive. These findings can be used in the design of modern interventions in the field of prevention and promotion of mental and social health.

Keywords: humor styles, anger expression, social rehabilitation, maladjustment, youth, mental health

1. Introduction

Anger, which is often experienced by socially maladapted youth, has become one of the basic psychological variables that are the subject of resocialization diagnostics. This diagnostic process focuses on the role of deficits in emotional control and immature self-control mechanisms, which are caused by the predominance of impulse-emotional structures over cognitive ones. In practice, this deficit most often comes down to deficiencies in the control of anger, manifesting itself in an excessive and/or inappropriate expression of anger (Bresin & Robinson, 2013; Hubbard et al., 2010; Beck & Fernandez, 1998; Dodge, 1991).

Anger is a natural, basic emotion that signals important needs are not being met. These unmet needs often activate defense mechanisms in dangerous and stressful situations (Averill, 2012; Frijda, 1986). However, when the stress level is too high or when the intensity, frequency, and duration of anger expression are not sufficiently controlled, there can be consequences on a person's physical and mental health, interpersonal relationship, and quality of life (Han et al., 2015). Many researchers argue that various types of social maladaptation symptoms and criminal behavior are closely related to negative affective states—primarily anger (Helfgott, 2008; Crick et al., 2006; Cornell et al., 1999; Borduin &

Schaeffer, 1998; Loeber, 1982; Eysenck, 1977).

According to research, humor strongly correlates with psychosocial adaptation (Yip & Martin, 2006; Martin et al., 2003). Adaptive humor styles often have a positive role in human development and functioning. This relationship is observed in both the intrapsychic perspective when humor stimulates cognitive and emotional development, and the interpersonal perspective, when it supports social development and increases social adaptation. On the other hand, non-adaptive styles of humor reduce the quality of life and interpersonal relationships, leading to a psychosocial maladaptation of the individual (McGhee, 2010; Martin et al., 2003; Lefcourt & Martin, 1986; Ziv, 1984).

While the impact of both humor and anger on physical and mental health and social adaptation is increasingly being the subject of scientific research, the relationship between humor and anger still seems insufficiently understood. Few studies have revealed that adaptive humor styles promote anger control, while non-adaptive, aggressive styles correlate with the tendency for uncontrolled expression of anger (Torres-Marin et al., 2018; Martin et al., 2003). The purpose of this study is to look at these findings in relation to youth who are socially maladapted. Analysis of these trends in the group of socially maladjusted young people can have valuable practical implications for social prevention and rehabilitation.

1.1 Anger expression

Despite many differences, the prevailing view in research is that emotions are a multifaceted and multidimensional phenomenon, including subjective feelings (emotion experience), behaviors (emotion expression), cognitions (cognitive appraisals), motivation (action tendencies), and physiology (Mulligan & Scherer, 2012; Frijda, 1986). According to Mulligan and Scherer (2012), the minimum conditions that define an emotion are that: (1) emotions are directed toward an object; (2) emotions involve bodily changes that are felt; (3) emotions contain a subjective experience; (4) emotions are triggered by a particular evaluation of an external event, usually referred to as an appraisal and (5) emotions have functional implications for individual and/or social life.

Therefore, emotions are most often defined as regulatory processes which help an individual achieve social adaptation. Emotions also affect communication processes by establishing, maintaining, changing, or breaking off relationships between the individual and his/her environment. In addition, emotional regulation is triggered when a person comes into contact with external or internal stimuli relevant to his/her body or personality (Campos et al., 1994; Frijda, 1986). More so, biology, physiology, and culture are all responsible for shaping emotions. All emotions, including anger, are subject to social control and self-control, are associated with social roles, and can be modified in accordance with the norms and values accepted in a culture (Lazarus, 1991).

Optimal psychosocial adaptation is achieved through self-control involving self-initiated reactions, through which the individual achieves a convergence between personal behaviors, thoughts and affective feelings and socially acceptable internal or external standards (Doliński, 2000). Effective (self)control of emotions, especially anger, therefore, determines the ability to control destructive emotions and manifest behavior in accordance with accepted social norms. However, it is important to recognize that experiencing and expressing anger are distinct concepts. Anger experience refers to the emotional state a person feels, in addition to the accompanying physiological responses. On the other hand, anger expression refers to the behavioral dimension of dealing with or expressing the feeling of anger (Han et al., 2015).

Depending on the degree of (self-)control, three styles of anger expression can be distinguished:

1. *Anger-in* is defined as redirecting anger towards oneself, repressing thoughts and memories related to situations that cause anger or denying the emotion of anger itself.

2. *Anger-out* is understood as expressing/showing anger towards another person or object in different ways, including physical actions/behavior or verbal communication in the form of criticism and insults.

3. *Anger-control* is defined as making an effort to control and manage anger, as well as expressing the emotion of anger in an assertive manner while respecting the rights and emotions of the other person (Spielberger et al., 1983).

When anger turns into uncontrolled rage and/or when the methods of managing anger used fail-which is often the case with individuals who are socially maladjusted-only two categories of behavior can appear (1) avoiding/suppressing the anger (*Anger-in*) or (2) uncontrolled external expression (*Anger-out*) (Lerner, 2003). While they both are negative, they can manifest in more constructive, safe, and effective way: in the case of *Anger-in*, it is controlled anger; and in the case of *Anger-out*, it is indirect anger (on the contrary to suppressed anger and direct anger, which are destructive, less

safe and ineffective) (Juczyński, 2012).

Researchers argue that both: a strong tendency to repress anger and an excessive expression of anger, are detrimental to the functioning of the individual. The suppressed emotions of anger and rage, especially when they persist for a long time and are experienced many times, become the basis for many neurotic disorders and psychosomatic syndromes (Everly & Rosenfeld, 1992). Conversely, uncontrolled and direct expression of anger in the form of aggression negatively affects the quality of human relations and social functioning (Averill, 2012; Crick et al., 2006; Connor, 2002). Adolescents who achieve a high level of expression of anger, directed both outwards (aggression) and inwards (suppression), are characterized by displaying rage or other negative emotions, committing suicide more often (Makara-Studzińska & Koślak, 2011), suffering from behavioral disorders, and displaying symptoms of social maladaptation and criminal behavior (Helfgott, 2008; Herrero & Colom, 2008; Crick et al., 2006; Loeber, 1982; Bandura & Ribes-Inesta, 1976). In addition, uncontrolled exteriorization of anger positively correlates with Type A behaviors (Hunter et al., 1991). However, adolescents externalizing anger are more confident and have higher self-esteem (Kruczek & Grzankowska, 2017). According to Keinan et al. (1992), it is not plausible to make a clear assessment of which type of anger, in or out, is healthier. Both, incorrectly expressed, can lead to emotional and behavioral difficulties.

Appropriate anger expression can help adolescents regain calm after the physical and psychological imbalance caused by anger. Therefore, it is necessary to control anger in an appropriate manner to maintain health and well-being, adapt socially, and engage in appropriate development. As such, humor seems to be an important factor supporting the appropriate expression of anger.

1.2 Humor styles

The literature offers multiple approaches to humor. From an integrative approach to humor, humor is defined as a complex phenomenon, comprised of four major components: (1) the social context; (2) the cognitive and perceptual process; (3) the emotional response (reaction); and (4) the behavioral and vocal expression in laughter (Martin, 2007).

According to the Humor Styles Model, there are four styles of humor, which affect the quality of people's interpersonal connections and intrapsychic functioning. These four styles of humor include self-enhancing, affiliative, aggressive, and self-defeating (Martin et al., 2003).

Many authors indicate that adaptive humor styles can be mechanisms of resilience and help facilitate people's adaptation to their environment when faced with challenging situations (Kuiper, 2012). Adaptive humor helps individuals gain perspective, distance themselves from problems, activate social support, boost positive feelings, and reduce tension (Edwards & Martin, 2014; Kuiper, 2012; Martin, 2007; Wright et al., 2005; Martin, 2003; Lefcourt, 2001b; McGhee, 1994).

It is generally accepted that *self-enhancing humor* is an adaptive and productive way for dealing with stress (Lefcourt & Martin, 1986), bolstering courage to confront difficulties (Dixon, 1980; Mishinsky, 1977), reducing emotional tension, and eliciting a sense of strength, control, and power when under threat (Dixon, 2021). This humor also improves an individual's quality of life (Yue et al., 2014). It buffers against the traumatic impact of difficult experiences by alleviating the negative emotions associated with them (Lefcourt & Martin, 1986) and intensifying positive ones (Kuiper et al., 1992). The second form of adaptive humor, *affiliative humor*, serves to improve relationships with others while strengthening bonds and minimizing conflict (Lethierry, 2006; Smith et al., 2000). In addition, it creates a positive atmosphere in a group (Karłyk-Ćwik, 2020), facilitates communication, creates a sense of group identity, motivates people to work together, and increases group effectiveness (Romero & Pescosolido, 2008; Martin, 2003; Martin et al., 2003; Lefcourt, 2001a).

Contrary to adaptive humor, non-adaptive forms of humor can reduce the value and well-being of an individual or other people. *Aggressive humor*, revealed in the form of mockery, ridicule, sarcasm, manipulation, deliberate misrepresentation, stigmatization, etc., can be used to improve personal well-being and achievement of goals at the expense of others (Zillmann, 1983). This type of humor is also interpreted as "a safety valve", without which hostility can manifest in forms that are more threatening to the individual's mental health and social harmony (Tomczuk-Wasilewska, 2009). The second non-adaptive humor style, *self-defeating humor*, prevalent in people with low self-esteem (Klein & Kuiper, 2006), is used to manage the stress associated with trying to gain the approval of others. Approval is gained through defensive denial, suppression of personal feelings, and discrediting oneself (Kubie, 1971).

1.3 Humor and Anger from the perspective of current research

In addition to the aforementioned functions of humor, the researchers also describe communication functions that humor provides, and define humor as a social and communication skill (Foot & McCreaddie, 2006). In this view, humor is a safe means of disclosing personal information and emotions; moreover, communication based on humor explicitly expresses those emotions that are suppressed in other situations. According to Foot and McCreaddie (2006), humor is also a socially acceptable way to expose personal antagonisms and express dislike and hostility towards others. An important communication function of humor is also the management of anxiety, stress and difficult emotions, by releasing tension (Foot & McCreaddie, 2006). In this context, humor is a safety valve for over-arousal. This notion is congruent with the Freudian concept of humor, which refers to the personality defense mechanism that overcomes negative emotions (Freud, 1993; Freud, 1959).

Many studies have confirmed the relationship between humor and social competence (Fox et al., 2013; Gest et al., 2001; Masten, 1986; Ziv, 1984) and social adaptation (Yip & Martin, 2006; Martin et al., 2003). Research indicates a positive correlation between adaptive ways of using humor (affiliative and self-enhancing) and indicators of mental health and well-being. People who prefer these styles of humor often display positive emotions, have high self-esteem, are able to enter intimate relationships, provide others with social support, and rarely experience negative moods such as anxiety or depression (Martin et al., 2003). On the other hand, non-adaptive forms of humor have been found to correlate strongly with hostility, aggression, anxiety, depression, low self-esteem, and a lack of ability to create interactions based on intimacy (Veselka et al., 2010; Vernon et al., 2008; Martin et al., 2003). Aggressive humor is also strongly associated with social maladjustment (Yip & Martin, 2006).

Moreover, it has been shown that adolescents and adults may use humor to regulate their emotions (Martin & Lefcourt, 1983). Humor positively correlates with adaptive, conscious control over aversive emotions (Mayer & Salovey, 1999). Rim (1988) has reported that some types of humor significantly negatively correlate with using avoidance styles in emotionally difficult situations, such as suppressing or denying emotions. More recent research has revealed a relationship between self-enhancing humor and better anger control and the tendency to avoid expressing it externally. In contrast, aggressive humor turned out to correlate with a tendency to directly express anger towards other people, while self-defeating humor was associated with an increased tendency to repress anger (Torres-Marin et al., 2018). Humor also involves a sense of emotional self-efficacy. This competence is accompanied by proper regulation of one's emotions, in terms of intensity, duration, and frequency (Saarni, 1990). Emotional competence directly related to the intensity of humor also consists of promoting positive emotions that have a constructive effect on personality dynamics and an integrated life (Bharadwaj & Sharma, 1994). In this way, through emotional competence, humor positively influences not only the individual's personality development, but also his/her social adaptation.

It is difficult to artificially classify and apply rigid, objective standards of division to human emotions and their expression. Therefore, it is necessary to analyze types of anger expression by categorizing them into naturally occurring subgroups which can better account for the characteristics of each person (Han et al., 2015).

Bearing this subgrouping in mind, this research aimed to identify types of anger expression occurring in adolescents who are socially maladapted. In addition, this study then investigated, the use of humor between subgroups of juveniles distinguished by their style of anger expression. Therefore, this study was guided by the following research questions:

RQ-1: What types of anger expression occur in youth who are socially maladapted?

RQ-2: Does the type of anger expression differentiate how juveniles use humor?

Research to date has shown that adaptive humor styles, especially self-enhancing humor, promote anger control, while non-adaptive styles correlate with a tendency towards uncontrolled expression or suppression of anger (Torres-Marin et al., 2018; Martin et al., 2003).

Accordingly, the following hypothesis for the second research problem was formulated:

H: There will be a significant difference in the type of anger expression and the way humor is used. People who express anger externally will exhibit more aggressive humor, while those who control their anger will more often use adaptive humor styles.

2. Method

2.1 Participants

The research sample consisted of 705 residents of juvenile social rehabilitation institutions. The youth who are socially maladapted ranged between 12 and 21 years old, with an average age of 17. There were 207 females (29%) and 498 males (71%) in the group. The inclusion criteria were: a) social maladaptation and/or demoralization of the youths; b) meeting the standards of the intellectual norm; c) residing at a correctional institution; d) consent of the institution's management to carry out the research and e) the respondents' consent to participate in the study. All under-legal-age participants had also parents' authorization to participate. The research was carried out in Polish juvenile resocialization facilities: juvenile educational centers (n = 13) as well as juvenile correctional and detention centers (n = 11).

2.2 Instruments

Two research tools were used in the study.

2.2.1 Anger Expression Scale (AES)

The first tool used for measuring individual predispositions is the Anger Expression Scale (AES) (Ogińska-Bulik & Juczyński, 2001). The scale consists of 20 statements divided into two subscales, one of which relates to outward-directed anger (10 statements), while the other is about inward-directed anger (10 statements). Each of these two scales has two subscales. In the case of outward-directed anger, these subscales were defined as direct anger (5 items) and indirect anger (5 items). Two subscales emerged as part of inward anger: controlled anger (6 items) and suppressed anger (4 items). Each statement is rated from 1 (never) to 5 (always). The overall result is the sum of the points, scored separately for external and internal anger. The psychometric properties of the scale are satisfactory and allow the tool to be used in scientific research. The values of Cronbach's alpha lie in the range of 0.73 to 0.83 for outward-directed anger and from 0.67 to 0.84 for inward-directed anger, which indicates high internal compatibility of the tool (Juczyński, 2012).

2.2.2 Humor Styles Questionnaire (HSQ)

The second research tool is the Humor Styles Questionnaire (HSQ) (Martin et al., 2003). It is a self-reported method that examines humor expression, in which the participant describes the intensity of behaviors such as reacting to various situations with humor. The questionnaire contains 32 statements in 4 scales: "Affiliative humor", "Self-enhancing humor", "Aggressive humor", and "Self-defeating humor", each containing 8 items corresponding to each sense of humor. The respondents provide answers on a seven-point scale, from 1 (I strongly disagree) to 7 (I strongly agree). The results are calculated by adding scores within individual humor styles. The reliability of the original version of the questionnaire's scales, measured using Cronbach's alpha coefficient, are in the range of 0.77 to 0.81 and indicate a high internal consistency of the tool. Equally high are the values of the coefficients obtained by the test-retest method, which checks the stability of the scales and ranges from 0.80 to 0.85. The psychometric parameters of the Polish version of the HSQ obtained in this study do not significantly differ from their counterparts in the original method (Hornowska & Charytonik, 2011).

2.3 Procedure

The study was conducted in the correctional institutions with the approval of the Directorate. The participants filled in traditional paper surveys in small groups of 3 to 5 people, in the common rooms or therapists' offices. On average, the survey took about 30 minutes to complete.

2.4 Data analysis

To categorize anger expression in adolescents who are socially maladapted, the four factors measured using the AES were grouped and reduced using k-means cluster analysis. The number of clusters tested was determined via k-fold

cross-validation. Then, the clusters obtained were compared in terms of the use of individual types of humor by people with specific profiles/types of anger. Analysis of Variance (ANOVA) for independent groups was used (after normality and homoscedasticity testing) to analyze statistical differences in mean values for the subgroups, along with the Fisher LSD post-hoc test to control for type 1 error. The statistical calculations were made using PQStat computer software (v. 1.6.2 64-bit).

3. Results

To determine the types of anger in juveniles, four subfactors were analyzed for k-means clusters: direct anger, indirect anger, controlled anger, and suppressed anger. As a result of the analysis, 3 clusters were created that differ statistically significantly in each dimension to include: direct expression of anger ($F = 663.90$; $p < 0.000001$), indirect expression of anger ($F = 342.36$; $p < 0.000001$), controlled anger ($F = 282.56$; $p < 0.000001$), and suppressed anger ($F = 137.61$; $p < 0.000001$). Cluster 1 revealed high scores for direct anger ($M = 18.74$) and indirect anger ($M = 18.87$), while it had relatively low scores for controlled anger ($M = 15.53$) and suppressed anger ($M = 10.64$). Cluster 2 showed relatively low and similar results in all four subscales: direct anger ($M = 12.65$), indirect anger ($M = 14.2$), controlled anger ($M = 16.74$), and suppressed anger ($M = 11.81$). Cluster 3 showed very low direct anger ($M = 8.77$), low indirect anger ($M = 11.36$) and suppressed anger ($M = 15.02$), and very high controlled anger ($M = 23.19$) (See Table 1). For this reason, in the study, the identified clusters were named as follows: Cluster 1-Anger-out type, Cluster 2-Low-Anger type, and Cluster 3-Anger-control type.

Table 1. Means and standard deviations of anger expression types in juveniles (N = 705)

Type	n (%)	Direct expression of anger		Indirect expression of anger		Controlled anger		Suppressed anger	
		M	SD	M	SD	M	SD	M	SD
Cluster 1 (Anger-out)	213 (30%)	18.74	2.57	18.87	2.8	15.53	4.34	10.64	2.98
Cluster 2 (Low-Anger)	290 (41%)	12.65	3.08	14.2	2.88	16.74	3.29	11.81	2.79
Cluster 3 (Anger-control)	202 (29%)	8.77	2.67	11.36	3.25	23.19	2.97	15.02	2.6

Source: authors' own research

Table 2. Comparison of humor styles used by three categories of minors, distinguished by the type of anger expression (ANOVA)

Category	Cluster 1 Anger-out		Cluster 2 Low-Anger		Cluster 3 Anger-control		F	p
	M	SD	M	SD	M	SD		
Affiliative humor	41.69	9.09	38.43	8.63	40.52	8.94	8.72	0.0001
Self-enhancing humor	35.36	8.59	33.46	7.24	34.84	8.79	3.71	0.024
Aggressive humor	33.61	7.50	29.56	5.83	24.48	7.22	94.28	< 0.000001
Self-defeating humor	26.44	8.32	26.48	7.47	25.28	7.84	1.62	0.197

Source: authors' own research

The three identified types of anger expression in youth were then analyzed with ANOVA to detect the differences in the use of humor between them. The three types of anger expression were grouping variables, while the four humor styles were dependent variables (four HSQ scales independently). The results of the analyses revealed the occurrence

of statistically significant differences between the compared groups of minors (clusters) in the use of three categories of humor (Table 2).

The ANOVA analysis revealed statistically significant differences in the use of affiliative humor ($F = 8.72$), self-enhancing humor ($F = 3.71$), and aggressive humor ($F = 94.28$) between the three groups of minors separated according to the type of anger expression. At the same time, no significant differentiation was found in the use of self-abusive humor between these groups of adolescents. In order to determine exactly which groups/clusters differ significantly, we employed Fisher's post-hoc analysis (Tables 3, 4, and 5).

Table 3. Differences in the intensity of affiliative humor between minors with different types of anger expression (Post-hoc Fisher LSD)

Affiliative humor	Anger-out		Low-Anger		Anger-control	
	t	p	t	p	t	p
Anger-out	---	---	4.06	0.00005	1.33	0.181
Low-Anger	4.06	0.00005	---	---	2.56	0.010
Anger-control	1.33	0.181	2.56	0.010	---	---

Source: authors' own research

As shown in Table 3, statistically significant differences in the use of affiliative humor occurred between adolescents with low levels of anger and youths who express ($t = 4.06$) and control their anger ($t = 2.56$). Juveniles with Low-Anger use significantly less affiliative humor than their counterparts in the other two groups (Anger-out and Anger-control). In addition, there are no statistically significant differences in the use of affiliative humor between minors with the outward expression of anger and those who report controlling their anger ($t = 1.33$).

The situation is similar in the case of self-enhancing humor (Table 4). Both minors who externalize their anger and those who control it use more self-enhancing humor than youths with a low level of anger. In this case, only the difference between the Low-Anger cluster and minors manifesting outward anger is statistically significant ($t = 2.59$).

Table 4. Differences in the intensity of self-enhancing humor between minors with different types of anger (Post-hoc Fisher LSD)

Self-enhancing humor	Anger-out		Low-Anger		Anger-control	
	t	p	t	p	t	p
Anger-out	---	---	2.59	0.009	0.65	0.511
Low-Anger	2.59	0.009	---	---	1.84	0.06
Anger-control	0.65	0.511	1.84	0.06	---	---

Source: authors' own research

There are also no differences in the use of self-enhancing humor between the youths who express their anger and those who control it ($t = 0.65$).

The largest differences of minors identified according to the type of anger expression relate to the use of aggressive humor (Table 5).

Table 5. Differences in the intensity of aggressive humor between minors with different types of anger expression (Post-hoc Fisher LSD)

Aggressive humor	Anger-out		Low-Anger		Anger-control	
	t	p	t	p	t	p
Anger-out	---	---	6.61	< 0.000001	13.71	< 0.000001
Low-Anger	6.61	< 0.000001	---	---	8.17	< 0.000001
Anger-control	13.71	< 0.000001	8.17	< 0.000001	---	---

Source: authors' own research

Adolescents with predominantly outward anger expression use aggressive humor more often than minors with low levels of anger ($t = 6.61$) and much more often than minors who control their anger ($t = 13.71$). Aggressive humor is the least often used by those in Anger-control, not only in comparison with adolescents who express their anger ($t = 13.71$), but also with those who display low anger expression ($t = 8.17$).

4. Discussion

The purpose of this study was to identify the types of anger expression used by adolescents who are socially maladapted and to determine whether there are significant differences in the use of humor between (sub)groups of minors identified by the type of anger expression.

The use of k-means cluster analysis led to the identification of three types of anger expression in the study population: Anger-out type, Low-Anger type and Anger-control type.

It seems interesting that the group of minors with Low-Anger type (Cluster 2) expression was the most numerous ($n = 290$; 41% of all respondents) of the three compared clusters. Nevertheless, 1/3 of juvenile respondents (Cluster 1, $n = 213$; 30% of all respondents) express their anger uncontrollably, most often in the form of aggressive behavior. This finding is consistent with the results of previous studies, both Polish (Urban, 2012; Bartkowicz, 1996; Baran & Bielawiec, 1994) and foreign (Sukhodolsky & Ruchkin, 2004; Bandura & Ribes-Inesta, 1976), which show that the intensity of anger and aggression among minors in resocialization institutions is much higher than in the group of their peers from public schools. The remaining 29% ($n = 202$; Cluster 3) are teenagers who try to control their anger and manage it in a constructive (assertive) manner. This expression can be a positive effect of the psycho-corrective and therapeutic treatment provided in resocialization facilities. However, this correlation requires further research.

The analysis of minors who exhibit different types of anger expression with regard to using humor has demonstrated that in general, juveniles with the external expression of anger who make up Cluster 1 (Anger-out type) use humor (all the styles) to the largest extent. Juveniles who control their anger (Cluster 3) use adaptive humor just as often, but use the aggressive style of humor significantly less often (the least often out of the three clusters). Youths with low levels of anger grouped in Cluster 2 (Low-Anger type) use adaptive humor to the smallest degree. The low anger type uses less aggressive humor than the group of minors who externalize their anger and, at the same time, more than the juveniles who control their anger. It was also found that there are no significant differences in the use of self-defeating humor between the groups of minors.

The study indicated that the use of adaptive humor styles accompanies both external and controlled expressions of anger. Both groups of juveniles, Anger-out type and Anger-control type, use affiliative humor and self-enhancing humor more often than minors with Low-Anger type. It is interesting that in the use of adaptive humor, no significant differences were found between minors who externalize their anger in an uncontrollable way and those who control it. Both groups use affiliative humor and self-enhancing humor similarly; moreover, they do it significantly more often than minors who experience less anger (Low-Anger type). According to the Model of Humor Styles (Martin et al., 2003), the use of humor and the selection of a particular style is motivated by a kind of "demand" for its specific functions. This demand may mean that adolescents who are socially maladapted and experience anger need more humor than minors

with lower levels of anger. The humorous expression can help them relieve the emotional tension that accompanies experiencing anger, thus regain calm after the physical and psychological imbalance caused by anger. In this view, humor would be a factor regulating anger at the level of experiencing this affective state.

Psychologists describe humor as a defense mechanism regulating emotions (Ruch & Kohler, 1998; Kuiper et al., 1992; Nezu et al., 1988; Lefcourt & Martin, 1986; Freud, 1959; Freud, 1993). By changing the primary and secondary cognitive assessment, it changes the perspective of the reality of self and attitudes towards difficult life situations (Lefcourt et al., 1997). Self-enhancing humor also reduces the intensity of emotional reactions in stressful moments of life without cutting off from threatening, negative information, which promotes appropriate decisions and adaptive behaviors (Porteous, 1988; Rim, 1988). It also helps to relieve negative emotions, especially anger and sadness, which usually cause insulating tendencies (Dixon, 1980; Mishinsky, 1977). People are often internally motivated to minimize negative and maximize positive affective states, which increases the readiness for a more optimistic revaluation by adopting a humorous point of view (Frijda, 1988). Situational meaning structures can be chosen in ways that decrease emotional intensity, prevent the occurrence of emotion, or make events appear more tolerable or pleasing (Frijda, 1988). In this way, the adoption of a humorous perspective contributes to the regulation of experienced anger.

On the other hand, the study shows that humor does not differentiate the activity undertaken by the individual to cope with the experienced anger-it accompanies both: the uncontrolled expression of anger (Anger-out type), eg. in the form of aggressive behavior as well as controlled anger expression (Anger-control type), e.g. in the form of assertive behavior. This suggests that humor does not participate in anger regulation processes at the behavioral level (expression). According to Baumeister et al. (2000), the cause of uncontrolled (aggressive) expression of anger may be (1) insufficient control, understood as a lack of sufficient efforts to control those states, or (2) improper control, understood as the use of ineffective or inappropriate techniques to regulate effect. When viewing humor as a social and communication skill, humor can be an effective technique for expressing and managing difficult emotions, including anger (Foot & McCreddie, 2006). Therefore, the teaching of humor-based communication techniques should be an important element of prevention and social rehabilitation.

The ANOVA also revealed that the type of anger expression is an important factor that differentiates the use of aggressive humor. In this case, minors with the external expression of anger most often use aggressive humor, while minors who control their anger use this type of humor the least often. This result is consistent with the findings of previous studies (Torres-Marin et al., 2018; Tomczuk-Wasilewska, 2009; Martin et al., 2003) and allows confirmation of the formulated hypothesis. It is worth remembering that this type of humor, although described as non-adaptive and non-constructive, is often interpreted as a "safety valve", without which hostility could manifest itself in a form that is more threatening to mental health and social harmony (Tomczuk-Wasilewska, 2009). This approach, derived from Freud's Theory of the Liberation of Energy, presupposed that humor (not just aggressive humor), which appears in situations that usually cause negative emotions-such as fear, anger, or sadness-allows for economic spending of psychic energy, activated to defend a human being against libidinal impulses. Thanks to humor, this energy is not suppressed, but diffused by laughter. In this way, the individual can undergo controlled and reversible, though temporarily infantilizing, self-enhancing regression (Freud, 1959; Freud, 1993).

It is worth noting, however, that according to Rosenwald (1964), the expression of laughter is determined by the individual level of flexibility-rigidity in the repression of biased content. If someone too rigidly suppresses aggressive content, they will not be able to accept it even in the form of a joke. Aggressive people, openly demonstrating violent behavior, tend to appreciate the humor more than those who repress impulses (Byrne, 1956). Similarly, jokes about hostility often amused those who flexibly control impulses more than those who reveal tendencies to over-control impulses or lack control (Rosenwald, 1964).

This literature suggests that juvenile delinquents with a tendency to express anger (Anger-out type) are more likely to use aggressive humor to regulate emotion because they have a higher level of flexibility in the repression of aggressive content. This flexibility, on the one hand, can be associated with deficits in the mechanisms of self-control. Conversely, it can be an important resource to protect personality from neurotic disorders (Plessen et al., 2020).

The results of the study indicate that humor, especially adaptive humor, can be an important factor in supporting the effective regulation of the anger of young people who are socially maladjusted. Minors experiencing anger, both those who control it and those who manifest it uncontrollably, use humor to reduce emotional tension and restore mental balance. In the case of individuals who are socially unadjusted, in addition to regulating the anger experienced, it is also

important to learn its correct expression. For this purpose, the teaching of communication techniques based on humor should be included in preventive and corrective programs.

5. Conclusion

The research aimed to answer the question about the types of anger expression used among socially maladapted young people and about their diversification according to the use of humor by minors.

Three types of anger expression were identified in the study group: Anger-out, Low-anger, and Anger-control. It was also established that there are statistically significant differences between the three groups of juveniles divided according to the type of anger expression in the use of three styles of humor: affiliative, self-enhancing, and aggressive. Young people with an external expression of anger use humor, both adaptive and aggressive, to the largest extent, while youths with low levels of anger use adaptive and aggressive humor least often. In assessing the intensity of humor styles, however, the lack of standardization of the employed research tool (HSQ) should be taken into account. Caution should be used when interpreting and generalizing these results due to limitations resulting from the convenience sampling for participant selection. The use of the HSQ questionnaire in the study sample is also a limitation, due to the fact that it is adapted to an adult population, and a part of the sample was under legal age. Therefore, in future studies, it is worth adopting the version of the tool to the age of individual participants by differential application of both versions of HSQ for adults and children. Furthermore, because only subjective data was used for the measurement of anger expression and humor styles, objective measurement methods such as observation should be used in the future to augment the results and increase data reliability.

Despite these limitations, the study may provide a starting point for further research on subjective and objective determinants of the effectiveness of the prevention of aggression and social rehabilitation. The results can also be used in the design of modern preventive and rehabilitation interventions, as well as the training of specialists dealing with health promotion, prevention, social rehabilitation or therapy.

Acknowledgements

The Author is grateful to the youth who took part in this research, and the institutions, educators, and parents who allowed them to do so.

Conflict of interest

The Author declares that there is no conflict of interest with this original study.

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