

## **The association between self-image and defence mechanisms in a group of adolescent patients receiving psychiatric treatment**

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### **Summary**

**Aim.** The aim of the study was to explore the relationship between various areas of self-image and defence mechanisms in adolescents. The study included a division into groups according to whether or not they were receiving psychiatric treatment.

**Methods.** Data were obtained from two groups: a clinical group (30 persons), consisting of adolescent patients of the Adolescent Inpatient Ward of the Child and Adolescent Psychiatry Clinic and a control group (40 persons), adolescents attending upper secondary school. The Defence Style Questionnaire DSQ-40 and the Offer Self Image Questionnaire were used in the study.

**Results.** Results showed no differences, in the maturity levels of the defence mechanisms, between the two groups. Subjects from the clinical group had a significantly lower self-image of themselves than subjects from the control group. In both groups, the use of mature defence mechanisms was accompanied by a positive self-image, while the use of less mature defence mechanisms was associated with a lower self-image. Comparison of the groups revealed different relationships between the aspects of self-image and used defence mechanisms, in particular the mechanism of projection. Number of significant correlations was greater in the clinical group.

**Conclusions.** In the context of lower self-image, the study revealed the importance of such defence mechanisms as projection, acting out, somatization or schizoid fantasies. The obtained results seem to confirm a hypothesis that the assessment of the maturity of defence mechanisms in the period of adolescence is less clear and clinically useful.

**Key words:** defence mechanisms, adolescence, self-image

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## Introduction

Self-image is a term used to describe the internal narrative about one's own self. This image is defined as an assessment of one's own competencies. It is a type of a map which individuals use to organise their own behaviour and their attitude towards their own self. It is an organized set of opinions, judgements and beliefs about one's own appearance, skills and abilities, intelligence, attitudes, psychological needs, relationships and position among other people as well as individual aspirations [1, 2].

Self-image is a complex and multidimensional construct. Authors dealing with this issue assume that it consists of three layers: descriptive, evaluative and normative [1–3].

There are many concepts of self-image. One of them is D. Offer's concept. Applying his long-term experience in empirical observations, the author based his understanding of the construct of self-image on the psychodynamic theory. According to Offer, self-image encompasses the entirety of observations, thoughts and feelings about one's self which can be named and articulated. In this perspective, self-image is a structure which integrates and stabilises both actions and the way one thinks about one's self and the world [4]. Most mental disorders – with certain reservations concerning restrictive anorexia and conduct disorders – are associated with negative aspects of self-image according to Offer's questionnaire in different populations and cultural contexts [5–15].

An interesting question may be raised concerning the relationship between self-image and defence mechanisms. Initially, a common feature of the defence mechanisms in the psychodynamic paradigm was the protection of the ego from the demands of the id. At present, defence mechanisms are understood as automatic self-regulating processes. Their aim is to reduce cognitive discrepancies and minimise sudden changes in external and internal reality. This is done by distorting the perception of threatening events [16]. Currently, numerous forms of personality disorders are defined, in part, with reference to defence mechanisms understood as different types of actions intended to protect one's self [17]. They are classified according to a hierarchy where the most immature pathological mechanisms are to be found at one extreme and the most mature and healthy strategies are located at the other. An individual profile of defence mechanisms is an indicator of the general state of the patient's mental health and ability to adapt and cope [18, 19]. According to Bond, [20] and Gralinski et al. [21], the employed range of defence mechanisms is related to the level of personality development and psychopathology. Furthermore, Paris [22] indicates their important, mediating role in the origin of mental disorders. Using more mature mechanisms is associated with a better adaptation to internal and external variations and requirements. Mature mechanisms allow for a more mature perception of inter- and intra-psychological phenomena, while immature mechanisms have the potential to distort perception to a significant extent.

Thus, a question arises about the dependencies between self-image and the type of defence mechanisms used by adolescents, taking into account the presence or absence of psychopathological symptoms. These issues are rarely the subject of research, but rather that of clinical studies and case reports.

## Material

The study group consisted of adolescent patients of the Adolescent Inpatient Ward of the Department of Child and Adolescent Psychiatry of the University Hospital in Krakow, who were treated after being psychiatrically diagnosed according to the ICD-10 diagnostic criteria. The patients were introduced into the study immediately after having been admitted to the ward. Patients diagnosed with psychosis and an IQ below 80 points (based on the Wechsler test) were excluded from the study. The study sample comprised 30 individuals, fifteen girls and fifteen boys. The mean age of the participants was 16 years and 4 months: the youngest study subject was 15 years and 4 months old while the oldest was 17 years and 6 months old. Psychiatric diagnoses in the clinical group: behavioural and emotional disorders – 9, anorexia nervosa – 6, adjustment disorders – 3, anxiety-depressive disorders – 2, situational reaction to stress – 2, dysthymia – 1, obsessive-compulsive disorders – 4, somatisation disorders – 1, anxiety disorders – 2.

The control group consisted of twenty girls and twenty boys who were not receiving psychiatric treatment. The mean age of the participants in the control group was 16 years and 9 months: the youngest study subject was 15 years and 9 months old and the oldest was 17 years and 8 months old.

The groups did not differ statistically in terms of age, sex, type of school, place of residence, family structure, parents' education level and parents' occupation.

## Method

A questionnaire to assess the maturity of defence mechanisms DSQ-40

To study defence mechanisms, the Defence Style Questionnaire 40 (DSQ-40) was used [23]. In Poland, this tool was translated in 1995 by a team led by A. Kokoszka and J. Pałczyński. Research on the psychometric properties of the research tool in a group of adolescents confirmed its satisfactory validity and reliability [24].

The current version of the tool consists of 40 questions which respondents answer with the help of a nine-point scale. Factor analysis of the original version identified three groups of mechanisms (defence styles).

20 defence mechanisms grouped into 3 categories [25] are assessed:

1. Mature style: sublimation, humour, anticipation, suppression;
2. Neurotic style: undoing, pseudoaltruism, idealisation, reactive formation;
3. Immature style: projection, passive aggression, acting out, isolation, devaluation, schizoid fantasy, denial, displacement, dissociation, splitting, rationalization, somatisation;

Internal consistency of the applied instrument was assessed by Cronbach's alpha coefficient. The analysis resulted in acceptable alpha coefficients for only two scales (humour  $\alpha = 0.767$ ; schizoid fantasies  $\alpha = 0.777$ ). An analysis of defence mechanisms with the DSQ-40 research instrument is based on a description of reactions to two different situations. A lack of consistency in the answers may be due to the fact that the respondent may have a relatively moderate tendency to use the investigated defence mechanism rather than a low reliability of the tool itself. The reliability of the tool

requires further studies on a larger population using a test-retest procedure. Due to doubts concerning the reliability of the tool, the authors shall refer to the scales where Cronbach's alpha was higher than 0.5 in the discussion section (Undoing = 0.584; Projection = 0.662; Acting out = 0.578; Isolation = 0.566; Somatisation = 0.582).

### The Self-Image Questionnaire

Another research instrument used in the study was the Self-Image questionnaire constructed by D. Offer (The Offer Self-Image Questionnaire for Adolescents) [4], which is intended to study the self-image of teenagers. The international version of the questionnaire was adapted to Polish conditions by W. Badura-Madej [26]. The reliabilities of all the scales of the questionnaire were measured by Cronbach's alpha coefficient. Results indicated high internal consistency for all the scales ( $< 0.94$ ).

The questionnaire is designed for young individuals between the ages of 13 and 19 years old. It consists of 130 items that relate to self-image. The responses were assigned to five areas of self-image, creating the following five scales:

1. The Psychological Self scale – it is made up of the three following scales: emotional control, emotional balance, and body image;
2. The Social Self scale – it is made up of the three following scales: social relations, social morals, and objectives;
3. The Sexual Self scale – it is made up of one scale: attitude towards sexual matters;
4. The Familial Self scale – it is made up of one scale: family relationships;
5. The Coping Self scale – it is made up of the following three scales: control of the external world, psychopathology and adaptation.

Quantitative features were presented using the mean value, median and standard deviation. A comparison of the mean values of the control and clinical groups was based on the Student's t-test or its equivalents, i.e. the Mann-Whitney U test in the case of a lack of normality. To assess correlations between two quantitative variables, the Person's linear correlation coefficient or the Spearman's rank correlation coefficient were used, as appropriate. Moreover, power analysis was performed. Results were deemed statistically significant when the calculated p-value did not exceed the statistical significance level ( $p < 0.05$ ). All statistical analyses were performed by means of SPSS Statistics v.21 (IBM, New York, USA).

## Results

A comparison of the group's mean values achieved by means of the DSQ-40 questionnaire indicated that only two defence mechanisms, humour ( $p = 0.008$ ) and dissociation ( $p = 0.041$ ), differentiated the clinical group from the control group on a statistically significant level.

A comparison of the mean values obtained by means of the Offer Self-Image Questionnaire indicated that subjects from the control group had a significantly lower self-image of themselves regarding the Psychological Self ( $p = 0.002$ ), the Social Self

( $p = 0.049$ ), the Sexual Self ( $p = 0.028$ ), and the Familial Self ( $p = 0.037$ ) than subjects from the control group.

A study of defence mechanisms in the control group gave statistically significant results, indicating that boys apply the mechanism of schizoid fantasy more frequently than girls ( $p = 0.029$ ). The clinical group provided results which indicate a significantly more frequent use of the mechanisms of sublimation ( $p = 0.048$ ) and somatisation ( $p = 0.004$ ) by boys and the suppression mechanism ( $p = 0.012$ ) by girls.

Results of the self-image study showed no statistically significant differences between the average scale values achieved by the girls and boys of the control group. In the clinical group, the results for the Psychological Self scale differed significantly. In this respect, the girls had a worse self-image of themselves than the boys ( $p = 0.024$ ).

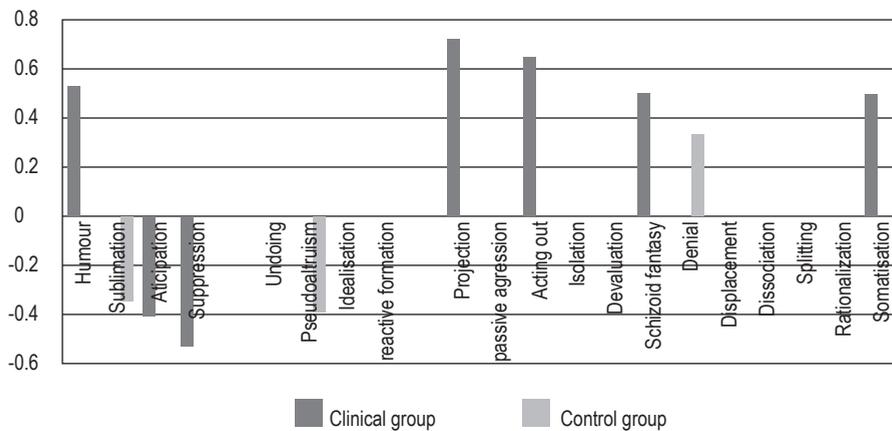


Figure 1. The analysis of correlation: Psychological Self x defence mechanisms

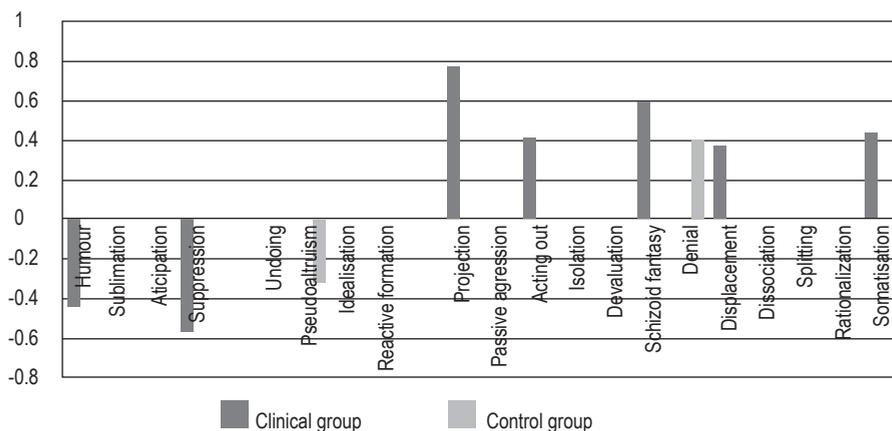


Figure 2. The analysis of correlation: Social Self x defence mechanisms

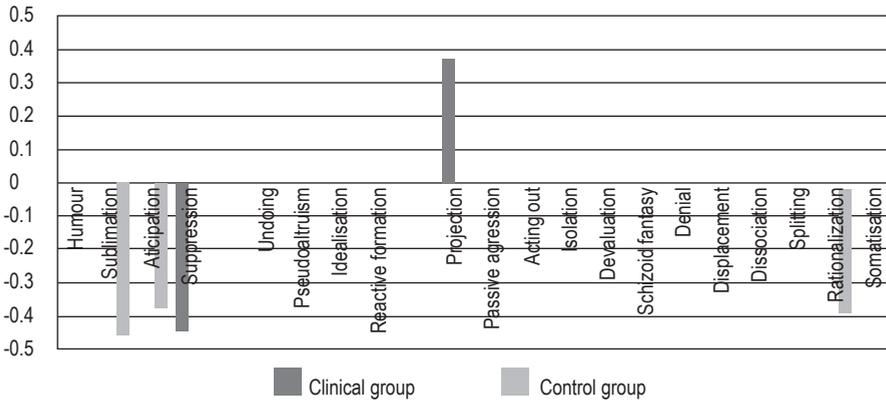


Figure 3. The analysis of correlation: Sexual Self x defence mechanisms

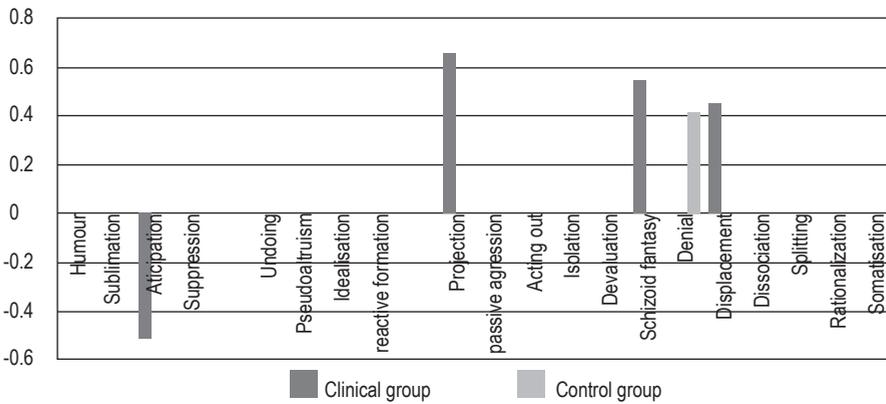


Figure 4. The analysis of correlation: Familial Self x defence mechanisms

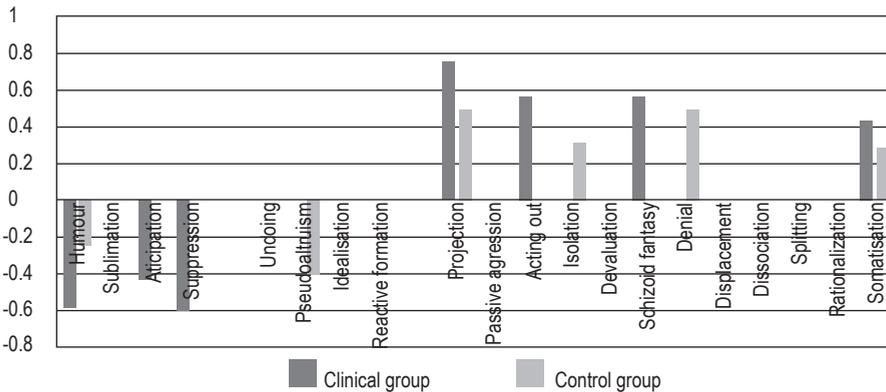


Figure 5. The analysis of correlation: Coping Self x defence mechanisms

The following graphs present the results of a correlation analysis between the various scales of the Offer's Self-Image Questionnaire and the individual DSQ-40 scales used for the study of defence mechanisms in the clinical group and the control group. The graphs show the correlation coefficient  $R$  with  $p < 0.05$ .

### Discussion

In the study, higher scores on the self-image scales, indicating a more negative image, were obtained in the clinical group. In terms of defence mechanisms, however, only humour and dissociation were significantly different between the two groups – the mean score was higher in the control group. This result raises questions about the use of the DSQ-40 test in similar studies and indicates the need to assess the reliability of the test in larger population with the use of test-retest procedure. The assumption that the clinical group does not significantly differ from the control group in the range of the employed defence mechanisms is contrary to the very concept of defence mechanisms. Less mature mechanisms are treated as less adaptive and as an important factor in the source of psychopathology [27]. The age of the subjects may also be an important factor. Division into mature and less mature mechanisms is less obvious in the period of adolescence, and the employed defence mechanisms are subject to undergo dynamic changes in the individuals during their development [28–31]. It seems, therefore, that adolescent psychopathology cannot be perceived from the perspective of mature defence mechanisms. Immature mechanisms, however, may be helpful in the implementation of development aims: for instance, devaluation, rationalisation or acting out may aid in the process of separation and individualisation. During the period of adolescence, immature defence mechanisms may occur, which are connected with this stage of development and a tendency towards partial regression characteristic of this period [32]. In this context, they may be understood as a constituent of a normative adolescent crisis in which immature defence mechanisms serve in a symbolic and actual separation.

An analysis of the achieved correlation results confirms the fact that in both the clinical and control groups there is a connection between self-image and the applied defence mechanisms. It is a two-way relationship in which the presence of particular defence mechanisms is associated with a better or worse self-image. A general tendency may be observed (with the exception of humour) in which the use of mature defence mechanisms is accompanied by a positive self-image, and the use of less mature defence mechanisms is associated with a negative self-image. It is a dependency which was to be expected based on the available literature on the subject. What is surprising in this respect, is the larger number of observations in the clinical group than in the control group. Although this tendency is [33–35] visible in both groups, the range of the defence mechanisms connected with the various aspects of self-image is different.

Statistical analysis indicates the important role of the mechanism of projection defined as the perception of and response to unacceptable inner impulses and their derivatives as if they were outside the self. In the clinical group, the study has shown a significant positive correlation between the mechanism of projection and all aspects of self-image. This means that the stronger the projection, the worse the self-image.

In the control group, this correlation was observed only in one area: the Coping self. The obtained result indicates that in our study projection constitutes the strongest defence mechanism ( $R \approx 0.7$ ) and is associated with a negative self-image in all the tested areas. The results may point to a cautious conclusion consistent with psychodynamic conceptualisation, that in the clinical group, in contrast to the control group, the mechanism of projection is heavily involved in the creation and maintenance of self-image.

The second reflection relates to the statistically unconfirmed observation of the authors indicating the existence of a smaller number of significant correlations in the control group than in the clinical group in four investigated areas (the Psychological self, the Social self, the Sexual self, and the Familial self). Only in the Coping self does the number of significant results in the control group grow. However, this aspect seems to be similar in character to the areas examined by the DSQ-40. What is important, is that this aspect does not significantly differentiate the clinical group from the control group. It may therefore be assumed that the self-image of adolescents from the untreated group is less influenced by defence mechanisms, including mature ones, than the self-image of the treated individuals from the clinical group. It may be expected that in healthy subjects, self-image is a more stable structure, less prone to internal conflicts and external factors. Hence the lower significance of defence mechanisms in that group. What is important and corresponds with previous findings, in the case of the Coping self, in contrast to the other investigated aspects of self-image, is that the study revealed a significant correlation with the mechanism of projection ( $R \approx 0.5$ ) in the control group. Although the obtained results cannot clearly indicate that the Coping self is a key aspect of self-image in adolescents, it nevertheless seems that maintaining a stable self-image, which additionally defines a sense of competence, own perpetration and “self-confidence”, is essential in undertaking autonomous activities, which constitute one’s identity in its formative period in the process of separation and individuation. This hypothesis, however, requires further empirical verification because the authors have not conducted a test of statistical significance on the difference between correlations in the groups.

## Conclusions

To sum up, it should be underlined that conclusions from the presented studies should be formulated with great caution, due to the specific nature and size of the study group and the context of the study, i.e. the fact that it was conducted in the first two days of hospitalisation. This variable may have significance – that has not been taken into account – for the emotional and cognitive functioning of the study subjects, and therefore the obtained results. Test tools based on the “paper and pencil” method also have their own methodological limitations [36, 37]. An additional doubt concerns the DSQ-40 tool, used to investigate defence mechanisms, and the question as to what extent the questionnaire methods are capable of assessing unconscious phenomena such as defence mechanisms, especially the less mature ones. Paradoxically, the more immature the defence mechanisms exhibited by the study subject, the less likely it is that the answers regarding the used defence mechanisms are reliable.

In conclusion, it should be emphasised that the defence mechanisms did not differ between the investigated groups in the level of maturity; however, there were significant differences in their range. This means that although the control and clinical groups differ in self-image, they are characterised by different correlations between various aspects of self-image and defence mechanisms.

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