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SUMMARY

This dissertation "The influence of diabetes and antidiabetic drugs on the graphic structure of the handwriting" is interdisciplinary, combining knowledge in the field of medicine and forensic writing research, which is reflected in its content.

The aim of the study is to present, based on comparative research on the example of analysis of the collected research material (handwriting samples of people with diabetes) – conclusions and to answer the following research questions:

1. Is there graphism of people with diabetes? (Are the changes in the image of the writing of people with diabetes so important, characteristic that they allow to distinguish the graphism of people with diabetes from the writing of healthy ones?)
2. Is the image of diabetes writing affected by antidiabetic drugs – including insulin and oral medications?
 - a) insulin — before administration; insulin — after administration?
 - b) oral medications — before administration; oral medications — after administration?
3. Do changes in the image of the handwriting of people with diabetes degrade graphism in such a way that they make it impossible to identify the performer of the text?

The research material collected for the purposes of the work – comes mainly from people with type I and II diabetes – patients of the diabetology departments of the University Hospital and the Dietl Specialist Hospital in Krakow, the Hospital in Olkusz and has been organized according to specific research groups. The control group for the comparative purpose was the population – healthy people. The catalogue of variables for this research was selected on the basis of a monograph by professor T. Widła "Features of gender" and the research method "ex post facto" based on J. Brzeziński, "Elements of psychological research methodology", which, in the author's opinion, was substantively justified, from the point of view of the research questions posed.

This work is divided into the following essential parts:

- I – Theoretical part,
- II – Empirical part and Discussion of results.

They are preceded by an introduction with research questions posed here and a brief general discussion of the research area and the structure of the work:

1. Chapter I – Forensic handwriting studies (including handwriting pathology).
2. Chapter II – Diabetes as a disease entity – medical aspect. (definition of diabetes, classification and diagnosis of diabetes, treatment and anti-diabetic drugs, complications of diabetes, especially hypoglycemia and hyperglycemia and their possible effect on writing).
3. Chapter III – Case-law. Legal aspects of diabetes.
4. Chapter IV – Expert opinion of the letter as a means of proof. The importance in the expertise of the handwriting of knowledge about the pathology of writing.
5. Chapter V – Research material (research material including research groups of people with diabetes, catalogue of variables and ways of their treatment. Ex post facto test method, chi square test in research).
6. Chapter VI – Presentation and description of research results (compilation of research results, description of research results, establishment of a catalogue of significant variables – features of the handwriting according to appropriate groups of probants: before insulin, after insulin, before oral drugs, after oral drugs).
7. Chapter VII – Discussion of results.

Conclusion

Bibliography

Annex

To sum up: In response to the research questions raised at the hearing, it should be stated that:

The results of the research presented in the paper - indicate certain features (variables) occurring in each research group in the graphism of people with diabetes. However, there are few of them and they occur sporadically. The catalogue of features characteristic of graphism of people with diabetes is included in the summary of research results – in Chapter VII – Discussion of results.

1. These are not specific, characteristic or unusual features of graphism, occurring only among people with diabetes. These features may also occur in people in the control group (healthy), which indicates their prevalence. Thus, - the graphism of a person with diabetes, - does not differ significantly from the writing of healthy people. It is impossible to categorically conclude from the manuscript alone that its performer certainly suffers from

diabetes. It seems that in this case these are plausible conclusions and should be formulated with caution. In the case of people with type II diabetes, a slightly larger accumulation of traits may be associated, among others, with aging and slow biological regression of writing skills. In each research group, there are several of these features, the most in the case of patients with diabetes II – after insulin administration and after oral drugs in type II diabetes.

2. As for determining the effect of antidiabetic drugs – both insulin and oral on the image of writing – it is difficult to give a definite answer as to the disclosure of variables important for this research group of people. Despite the presence of significant variables, they are not typical enough to indicate that the administration of antidiabetic drugs (insulin or oral) has an effect on these variables. In the case of the research group, after insulin administration, a larger and more numerous group of important variables was revealed, but the above remarks also apply here. The most significant for the results of the work turned out to be left-hand initiation. This feature was included in the features of the writing of people with type II diabetes after insulin, the writings of people with type I diabetes before insulin, the writings of people with type I diabetes before oral medications, people with type II diabetes after oral medications.

3. Deviations that occurred in the image of the writing of people with diabetes do not degrade graphism, in such a way as to be able to prevent individual identification of the performer of the text. The writing of diabetics can be the subject of identification studies.

Determining the set of features of the writing constituting the biography of a diabetic may have practical and theoretical significance in forensics, mainly in civil proceedings, e.g. in order to identify the author of wills, when drawing up and concluding such legal acts as: civil law contracts, donation agreements, anonymities, declarations of will, signatures on documents, etc. In addition, this research may be useful in forensic science in deepening knowledge of the graphic structure of writing, dependent on the physiological state of man, which is a disease; it is possible to get to know better the changing picture of writing under the influence of pathological changes in the human body, resulting from both the disease and the influence of drugs. In addition, this research may be relevant in group identification in writing studies.