



Position of a witness in criminal proceedings

Postavení svědka v trestním řízení

Roman SVATOŠ¹

¹Faculty of Health and Social Studies, University of South Bohemia, Czech Republic

The manuscript was received on 29. 11. 2018 and was accepted after revision for publication on 10. 12. 2018

Abstract:

The problem of the failure of evidence in criminal proceedings is a neverending topic. Individual states search for ways to adjust their Codes of Criminal Procedure – under the observance of human rights and fundamental freedoms - so that the law enforcement authorities are able to produce sufficient evidence that would lead to successful criminal proceedings. This paper will deal with problems of an institute of detention of a witness in criminal proceedings, in particular with respect to the legal regulation of individual selected European countries. Individual legal regulation will be compared, with the intention of obtaining inspiration for the recodification of the Code of Criminal Procedure in the Czech Republic.

Keywords: witness, order detainment, deadlines, international adjustment

Abstrakt:

Problematika důkazní nouze v trestním řízení je věčně živé téma. Jednotlivé státy hledají cesty, jak při zachování základních lidských práv a svobod, upravit své trestní řády, aby orgány činné v trestním řízení byly schopny zajistit dostatečné množství důkazů, které by vedly v úspěšnému trestnímu řízení. Tento příspěvek se bude zabývat problematikou institutu zajištění svědků v trestním řízení, a to z pohledu právní úpravy jednotlivých vybraných evropských zemích. Konkrétně bude provedena komparace jednotlivých právních oprav s cílem získání inspirace pro práci na rekodifikaci trestního řádu v České Republice.

Klíčové slova: svědek, pořádkové zajištění, lhůty, mezinárodní úprava

Introduction

The success of criminal proceedings particularly depends on whether the courts have enough of a quality body of evidence during their decision making to be able to



state without [11] any reasonable doubt that the discussed act is a crime, that it was committed by a particular person, and to decide on a punishment. The fact that there is often a lack of the necessary evidence then leads to acquittal and the work of all the concerned law enforcement authorities is for nothing. The courts very often use only testimonies and there is a lack of other evidence. However, it often happens that the witnesses unreasonably refuse to testify. The law enforcement authorities still more frequently face the problem that the properly summoned witnesses do not appear (without a sufficient excuse) before these authorities, so it is not possible to hear the witnesses, and thereby they hinder the course of the criminal proceedings which causes longer criminal proceedings. The purpose of this paper is to analyse legal regulations of the institute of detention of witnesses [2] in selected European countries and their mutual comparison and possible inspiration for Czech legislators.

1. Present legal regulation in the Czech Republic

In accordance with § 97 Code of Criminal Procedure, everyone is obliged to appear upon a summons and to testify as a witness to what they know about the criminal offence and the offender, or the circumstances relevant to the criminal proceedings (unless it is a case of prohibition of interrogation or there occur conditions to exercise the right to refuse to testify and a witness uses this right).

If a witness who was duly summoned fails to appear without a sufficient excuse, they may be brought before court. The witness must be instructed on this in the summons. They shall be also instructed in summons that if they fail to appear without a sufficient excuse, they may be punished with a fine for hindering court procedure [15]. In particular, if a person does not follow an order or an appeal according to the Code of Criminal Procedure without a sufficient excuse, the presiding judge (in a pre-trial a public prosecutor, or a police body) may punish them with a fine for hindering court procedure to the amount of up to 50,000 CZK. This fine for hindering court procedure can be also imposed for unreasonable refusal of testimony. If a witness has been produced, his identity shall be established. If a witness refuses to prove their identity, and the identity cannot be established neither pursuant to the said data nor in the available registers, a policeman follows provisions of Section 63/64 of the Act on the Police of the Czech Republic, and they are entitled to ascertain information required for their identification through fingerprints, identification of physical signs, somatometry video, audio and other recording and taking biological samples enabling the acquisition of information on genetic marker [18]. If the procedure cannot be executed because of a person's resistance, a policeman is entitled to overcome this resistance, while of course observing all the rights of the witnesses [16]. The method of overcoming the resistance shall be decided by the intensity of the resistance. The bringing of a person shall not exceed the necessary time for the establishment of their identity. If a policeman does not identify the person within 24 hours of production, they are obliged to release them.

We can conclude that if a witness fails to appear without sufficient excuse before a law enforcement authority, they may be produced, or they may be punished with a procedural fine. If their identity has been established and a witness unreasonably refuses to testify, they may be also punished with a fine for hindering court procedure. They shall be released after these procedures. A policeman may

restrict their personal liberty for the period of up to a maximum 24 hours from bringing, particularly during cases when it is impossible to establish their identity. Czech legal regulation does not know any other restrictions.

2. Legal regulation in the Federal Republic of Germany

German adjustment of securing witnesses who fail to appear without a sufficient excuse before a law enforcement authority, or unreasonably refuse to testify or withhold an oath, is built on a completely different philosophy to the Czech one. The German Code of Criminal Procedure [Strafprozessordnung (StPO) 1950] solves the given problems primarily in the provisions of Sections 51 and 70 stop [8].

This regulation has two parts. For the first, consequences concerning the unreasonable failure of a witness to appear, and for the second if a witness unreasonably refuses to testify [7].

If a witness who was duly summoned fails to appear without sufficient excuse before the authority that summoned them, and in this regard the costs of proceedings arise, they shall cover them in accordance with Section 51 StPO. He or she is also cumulatively punished with a fine for hindering court procedure and if they reject payment of the fine, they can be subject to disciplinary detention (Ordnungshaft), which forces a witness to uphold their financial duty. If a witness who was duly summoned fails to appear without sufficient excuse before the authority that summoned them so that their presence before this authority cannot be secured, they can be produced. In accordance with Section 135 StPO, they are produced before a judge and interrogated. In cases where the conditions for procedural detention are not fulfilled, they shall be released after a hearing at the latest by the end of the next day after the day of production. If a witness does not appear at a summons, because their location is unknown and they cannot be produced, in accordance with Section 131a StPO an investigation of the residence of the witness can be ordered. In the case of proceedings concerning a severe crime, there can be ordered a public search, so a witness can be represented in the media. This publication can, in accordance with Section 131b StPO be executed only if the identification of the witness is impossible in another way or is essentially aggravated. Only a judge can make such an order.

Another case relates to a situation when a witness unreasonably refuses to testify or withholds to swear an oath. In such a case, similar coercive measures against them are used as in the cases of unreasonable failure to appear. So, if a witness unreasonably refuses to testify, he or she is charged the costs incurred due to this refusal. He or she is also punished with a procedural fine, and if they refuse to pay this fine, he or she can be a subject of procedural detention that forces a witness to defray the incurred obligations. If a witness unreasonably does not want to testify, the court may also order custody. This custody shall last until the end of the trial, however, for a period of 6 months at the most. This custody can be decided in the pre-trial, as well as during the trial. These measures fall within the cognizance of a judge in the pre-trial, a mandated judge, as well as a requested judge. If these measures expire, they cannot be repeated in the same (or the other_ proceedings relating to the same act.

3. Legal regulation in the Republic of Austria

The Austrian Code of Criminal Procedure [Die österreichische Strafprozessordnung (ÖStPO) 1975] [9] solves the given problems especially in Section 93 StPO under the title “Coercive power and coercive measures, procedural penalties” [20].

According to this legal regulation, the Austrian criminal police are entitled to use adequate and reasonable pressure to enforce their statutory powers, and this applies even for the enforcement of an order of prosecution or court. The criminal police are also entitled – under the fulfilment of statutory conditions - to use physical violence against a person if it is necessary with respect to the investigation or evidence production. The affected person will be informed in the summons of the opportunity to use a direct pressure (production) and an opportunity to use other coercive measures. Should it endanger the success of the investigation and evidence proceedings, this information will be omitted. If a person refuses the act which they are obliged to perform by law, for example to appear before an authority and testify, this act can be enforced directly through pressure, for example in the form of bringing. If this process is impossible, a person - if he or she is not suspected and he or she does not fulfil the duty to testify by law, can be forced by means of coercive measures to fulfil their obligation. A coercive measure can be a monetary penalty up to the amount of 10,000 EUR and, in case of a severe case a term of imprisonment up to six weeks. The court - on request of a public prosecutor, shall decide on the application and the extent of the range of coercive measures [1].

4. Legal regulation in the Slovak Republic

In the Slovak Republic, the problems of securing a witness for the purposes of criminal proceedings are stated in Section 88 of Act No. 301/2005 Code of Criminal Procedure (Trestný poriadok). Detention of a witness is a procedural measure of coercive character that is applied to secure and force the presence of a witness before court at the trial [3].

The Slovak adjustment results from the philosophy that a witness who does not voluntarily fulfil their obligation, and for whom the other measures that shall make them appear before the presiding judge to testify are not effective, can have their individual freedoms restricted. The police detect a witness, then they are brought before the presiding judge who will hear them. The Code of Criminal Procedure states for a time-consuming bringing - if for example a witness is detected on the other side of the republic, a term of 24 hours. Within this term, a witness should be managed to be brought before the presiding judge. Then there is a term of 48 hours for the presiding judge to hear the witness. Of course, the term of 48 hours is too short to order a trial to hear the witness or to enable the parties (the party that suggested to hear the witness as well as the counterparty) to examine the witness contradictory. Considering this term, a witness will be heard by the presiding judge out of the trial or a public session. However, in order for parties to observe the right to an opportunity to hear a witness in a contradictory way, the presiding judge who has decided on securing the witness, shall notify the prosecutor as well as the defendant in an appropriate way and, in cases when the defendant has a defence counsel, then his defence counsel. If a

prosecutor and the defendant or his defence counsel were notified of the opportunity to be present at the hearing of the secured witness, although they waived this right, and this witness, despite being summoned to the trial or a public session, will not appear again, the record of his hearing can be read at the trial or a public session. This conforms to the International Covenant on Civil and Political Rights and the Convention on the Protection of Human Rights and Fundamental Freedoms.

Section 88, Subsection 5 of the Code of Criminal Procedure (Trestný poriadok), can be considered as positive. It is a certain policy for cases in which the presiding judge (who has decided on securing a witness) will not be able to perform the hearing. In this case, the police bring the witness before another judge of the same court, and that judge will perform the act. This avoids a situation where the presiding judge who has ordered the ensuring of a witness cannot perform the hearing for any reasons, and the witness is then released after 48 hours, thereby obstructing the act.

5. Proposed Czech adjustment

The Ministry of Justice of the Czech Republic followed lamentation of the law enforcement authorities and proposes an introduction of an institute of coercive measures to our legal order. The legislation department of the Ministry of Justice of the Czech Republic prepared an adjustment of the Code of Criminal Procedure that contains a new Section 66a stating coercive detention in order to enable the restriction of a witness's freedom if they repeatedly do not follow the summons or obstruct an act in a considerable way.

This proposal is as follows: “(1) Who, without a sufficient excuse, repeatedly fails to follow an order or an appeal of a law enforcement authority, or obstructs a court session or an act of a pre-trial in a considerable way, when the other measures have already been used against him or her with no success, and with respect to the person relating to a coercive detention, nature and seriousness of their act, it is impossible to achieve a coercive detention through another measure at the time of decision making, a person's freedom can be restricted, however, only for a maximum of 48 hours and only to the extent that is necessary to ensure their participation in an act. (2) The court will decide on the restriction of an individual's freedom and, in the pre-trial, a judge will issue a decision following the proposal of the prosecutor that will set the length of the period of restriction on individual freedoms. In cases in which the said period is in excess of the set period, this is always a reason for the release of the injured persons from the coercive detention.

There is an innovation relating to witnesses who do not appear before court or obstruct other important acts of investigation. It has been proposed to permit the detention of a witness or another person as ultima ratio in order to ensure their presence at the given act. Considering the securing acts, there may be, for example, the possibility to seize a witness for a certain period of time in order to ensure their presence in the trial (as is common abroad). It could be realized so that the court will order at the police in advance to secure a common absentee. Such a detention may be applied only against a person who (without a sufficient excuse) fails to follow an order or appeal of a court, or who obstructs a court session, and for whom the required aim

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cannot be reached through another compulsory measure. The term for detention should be up to a maximum of 48 hours.

The subject matter of the Code of Criminal Procedure – and the main principles of the proposed recodification of criminal procedure law, are also connected with these problems. It has been stated that within “measures to maintain the rules of order,” criminal proceedings are often obstructed, not only by the defendant, but for example by undisciplined witnesses who intentionally leave their place of residence at the time of the trial and delay the proceedings. Therefore it has been proposed ‘ultima ratio’ to allow the seizure of a witness or another person in order to ensure their presence at the required act. Such detention may only be applied against a person who, without a sufficient excuse, fails to follow an order or appeal of a court, or who will obstruct a court session, and the required aim cannot be reached through another compulsory measure. In accordance with the principle of restraint and adequacy, the person’s personal liberty can be restricted up to a maximum 48 hours. A court will decide the restriction of personal liberty; a complaint can be filed against this resolution. The complaint does not have a suspensive effect. The restriction of personal liberty, in accordance with the written order of the court, will be performed by the bodies of the Police of the Czech Republic.

The Union of Defence Counsels of the Czech Republic has refused this proposal in its opinion on No. 8/2015 to the amendment of the Code of Criminal Procedure, where it has been stated among things, that the Union also vehemently protests against the new proposal to introduce procedural detention. Disagreement with this adjustment relates to the proposed institute of procedural detention that may allow the seizure of a person who fails to follow an order or appeal of a law enforcement authority or a court session, or who will obstruct an act of criminal proceedings in a serious way. Such a person can be detained for the period of 48 hours only when the other measures have been already applied against he or she without any results, and with respect to his or her personality and seriousness of his or her act it cannot be reached the purpose of the procedural detention through another measure at the time of decision making. It is without doubt that such a person can be even a disobedient defence counsel. However, then the defence is not a part of the charge but really its victim. It is then fully reasonable that the Union of Defence Counsels of the Czech Republic essentially protests even against such proposals.

According to the Ministry of Justice, the proposed adjustment is not an unusual one. The institute of detention of an uncooperative witness is known for example in the Slovak, German or Austrian legal orders. A condition for restriction would be previous unsuccessful use of moderate measures (the relation of subsidiarity) to secure the presence of a person at an act. A judge should observe the principle of adequacy while deciding on this restriction of personal liberty; then they should consider whether the public interest in proper performance of the purpose of criminal proceedings upholds the interest to minimize interference to personal liberty. In other words, the court should have to consider carefully whether the measure to maintain the rules of order has been fully necessary under the given circumstances of a case, and whether it is not disproportional to the meaning of a criminal case and to the security of the participation of the seized person for the course of criminal proceedings. Such a person who would face restriction of their liberty for a short period of time would be put into a police cell.

The needed introduction of this institute into our Code of Criminal Procedure is further mentioned for example by Fryšťák. In his opinion it should be modified 'de lege ferenda' in cases when a person (without a sufficient excuse) repeatedly fails to follow an order or appeal of a law enforcement authority, or who obstructs their acts in a serious way may be restricted of his or her liberty (for up to a maximum of 48 hours). This restriction can be realized only with respect to his or her personality and seriousness of his or her act, and when the purpose of the procedural detention cannot be reached through another measure at the time of the decision making [5].

6. Discussion

Several questions arise in this regard. In particular, the specific group of persons related to the institute of "procedural detention". If these persons shall be only witnesses or also the persons who obstruct the criminal proceedings. The proposed amendment of the Code of Criminal Procedure has used the wording "Who without a sufficient excuse daytime repeatedly fails to follow an order or an appeal of a law enforcement authority or obstructs a court session or an act of a pre-trial in a considerable way,". According to such proposed wording any one can be really affected by this measure, then ab absurdum even a defence counsel. I believe that the legislators used such a wide definition of the circle of persons, so that not only the witnesses are forced to fulfil their obligation, but also the other persons who are not witnesses but who repeatedly fail to follow an order or appeal of a law enforcement authority or a court session, or who will obstruct an act of pre-trial in a serious way. These persons, who are not witnesses, could certainly disrupt the course of criminal proceedings in a serious way. Then a question arises as to which to choose - a Slovak adjustment or a German one (when these both use a similar measure concerning only a witness). Or should we choose the Austrian adjustment (that is concerned also with other persons except for a witness). I think that this problem could be sold with a certain compromise; namely so that the detention to maintain the rules of order would be used only in case of a witness. In this case, the said institute should be called "Detention of a witness". I would propose to preserve the current legal regulation in persons who are not a witness, and to force these persons to fulfil their obligation by means of a procedural fine.

Another question is the period of time of detention. The proposed amendment states the period of time up to 48 hours. It may result from the deadlines set by the Code of Criminal Procedure in case of a detention of a suspect or an accused. Yes, concerning an accused and a suspect of a crime, these persons must be released at the latest up to 48 hours after a hearing, unless they are brought to the court for another decision. Then the court has 24 hours for their hearing and decision on the next steps. The total restriction of personal liberty of these can take a maximum of up to 72 hours, when 48 hours relate to detention and 24 hours relate to hearing before the court. In this regard, it can be polemized with the opinion of the Chamber of Attorneys, which has stated that it is necessary to remember that legitimacy of procedural detention - which shall be a reaction to procedural lack of discipline of the participants of the proceedings, is really markedly weaker than the legitimacy of detention, arrest and custody of the accused or the person suspected of a crime. Yes, it is, however, concerning the periods for ensuring a proper course of proceedings, we must be aware of the fact that the deadlines for a suspect or the accused are destined especially to

ascertain the grounds for custody. On the contrary, in the seized witnesses they have a completely different purpose, which is the hearing of these persons and, after being heard, these persons will be released, *ipso jure*. I think that the law enforcement authorities will not be able to reach the purpose of this measure within the proposed 48-hour deadline and they will not manage to bring a witness before the appropriate authority in order to hear them properly from the moment of their detection until the period of release. It is necessary to understand that the policemen of the Police of the Czech Republic will track down the witness on the other side of the republic (or abroad). So, to ensure a contradictory examination of a witness, i.e. to ensure the right of the accused to examine a witness contradictory, it will be necessary to bring the detected witness before the requesting authority that is in contact with the accused or his defence counsel. While transporting, the requested authority will instruct the accused or his defence counsel and get ready for a hearing. This transport, even considering the small area of the Czech Republic and the underuse of modern vehicles, may take several hours. Even if the accused or their defence counsel manages to be instructed and prepared for a hearing, the total proposed deadline of 48 hours would not be sufficient. This means not only to inform the accused or his defence counsel, but also to provide them with the necessary time to appear at the hearing. Considering these possible problems, I would therefore suggest to use the legal regulation of the Slovak Republic that sets a time period of 24 hours from the tracking down of a witness to bringing him or her before a judge (and 48 hours for the own hearing). A solution in suitable cases could also be the hearing of a witness by means of video [4].

The problems of the seizure of a witness have been solved above. These are concerned with the deadlines for ensuring the presence of a witness before a law enforcement authority. These periods, however, and the other measures such as a procedural fine, should make a witness testify. If a witness decides not to testify, then the period of 48 hours, and eventually 72 hours, will not make him testify. In this case it is worth considering the German or Austrian solution. These possibilities of the long restriction of personal liberty of a witness (Austria - 6 weeks, Germany - 6 months) shall ensure that a witness will consider whether to testify or not. An advantage of these long deadlines is also the fact that they allow (in most cases) the ordering of a trial and to hear a witness directly at the trial.

Considering our experts' public reaction to the opportunity to introduce the institute of "procedural detention", a discussion on this topic must be postponed for the future. In our environment, we are not prepared for such a discussion yet.

Conclusion

The problems of speed and success of criminal proceedings continue to be discussed. In order to speed up criminal proceedings and successfully perform an act of criminal proceedings, there has been proposed an institute of "Procedural detention" to our Code of Criminal Procedure in the Czech Republic, which may fulfil those requirements. There was a large discussion on the need and constitutionality of this institute on the part of experts dealing with these problems. Under international and historical comparison the introduction of the said institute seems to be reasonable. According to the legal regulations of our closest neighbours, it is possible to inspire

and adjust this measure in order to ensure the speed and effectiveness of criminal proceedings under the observance of the basic principles of a legal state.

References

- [1] BACHNER-FOREGGER, H. *Strafprozessordnung (StPO)* (f. Österreich). Broschiert. Verlag: Manz'Sche Verlags- U. Universitätsbuchhandlung, 2008, ISBN 3214129798.
- [2] BOER, T., ZIECK, M. ICC Witnesses and Acquitted Suspects Seeking Asylum in the Netherlands: An Overview of the Jurisdictional Battles between the ICC and Its Host State. *International Journal of Refugee Law*, Volume 27, Issue 4, 1 December 2015, Pages 573-606, ISSN 0953-8186.
- [3] ČENTÉŠ, J. a kol. *Trestné právo procesné. Všeobecná a osobitná časť. 2. vydanie.* Šamorín: Heureka, 2012, Pages 864. ISBN 978-80-89122-76-9.
- [4] DUMOULIN, L., LICOPPE, C. Videoconferencing, New Public Management, and Organizational Reform in the Judiciary. *Policy and Internet*, Volume 8, Issue 3, 1 September 2016, Pages 313-333, ISSN 1944-2866.
- [5] FRYŠTÁK, M. Procesní postavení svědka (poškozeného) a jeho výslech v přípravném řízení. *Trestněprávní revue*, č. 10/2014, Pages 225, ISSN 1213-5313.
- [6] GUDJONSSON, G.H. Investigative interviewing: Recent developments and some fundamental issues. *International Review of Psychology*, Volume 6, Issue 2-3, 1994, Pages 237-245, Online ISSN 1464-066X.
- [7] LöWE, R. *Die Strafprozessordnung und das Gerichtsverfassungsgesetz: StPO*, Grosskomenar, Zweite Band. Berlin: Der Gruyter Recht, 2012, Zeite 1312. ISBN 3899494907.
- [8] MEYER-GROSSNER, L. *Strafprozessordnung mit GVG und Nebengesetzen.* 46. Auflage. München: C. H. Beck, 2003, Pages 2047. ISBN 3406493866.
- [9] MEYER-GOSSNER, L., SCHMITT, B. *Strafprozessordnung: Gerichtsverfassungsgesetz, Nebengesetze und ergänzende Bestimmungen (Beck'sche Kurz-Kommentare, Band 6) Gebundene Ausgabe.* Verlag: C.H.Beck; Auflage: 60 (26. April 2017). ISBN 3406703843.
- [10] *Novinky trestního řádu: předběžná opatření a zajištění svědka.* [online].[cit. 10.07.2018]. available from: <http://www.ceska-justice.cz/2014/04/novinky-trestniho-radu-predbezna-opatreni-a-zajisteni-svedka/>
- [11] PICINALI, F. *Criminal Law, Philosophy (2017).* [on line] [cit 15-6-2018] available from: <https://doi.org/10.1007/s11572-017-9440-y>
- [12] *Rekodifikace trestního řádu.* [online].[cit. 10.07.2018]. available from: <http://www.pravniprostor.cz/clanky/trestni-pravo/rekodifikace-trestniho-radu>

- [13] Sdělení č. 209/1992 Sb. Sdělení federálního ministerstva zahraničních věcí o sjednání Úmluvy o ochraně lidských práv a základních svobod a Protokolů na tuto Úmluvu navazujících
- [14] *Stanovisko Unie obhájců ČR č. 8/2015 k návrhu novely trestního řádu.* [online].[cit. 10.07.2018]. available from: <http://www.uocr.cz/stanovisko-unie-obhajcu-cr-c-82015-k-navrhu-novely-trestniho-radu/>
- [15] ŠÁMAL, P. a kol. *Trestní řád I, II, III.* 7. vydání. Praha: Nakladatelství C. H. Beck, 2013, Pages 4720. ISBN 978-80-7400-465-0.
- [16] *Unie obhájců: Navrhovaná novela trestního řádu je protiústavní.* [online].[cit. 10.07.2018]. available from: <http://www.ceska-justice.cz/2015/09/unie-obhajcu-navrhovana-novela-trestniho-radu-je-protiustavni/>
- [17] Usnesení Nejvyššího soudu České republiky sp. zn. 8 Tdo 235/2015-19.
- [18] VANGELI, B. *Zákon o Policii České republiky.* 2. vydání. Praha: Nakladatelství C. H. Beck, 2014, Pages 488. ISBN 978-80-7400-543-5.
- [19] Vyhláška č. 120/1976 Sb. Vyhláška ministra zahraničních věcí o Mezinárodním paktu o občanských a politických právech a Mezinárodním paktu o hospodářských, sociálních a kulturních právech.
- [20] WEIGEND, T. *Strafgesetzbuch StGB.* Verlag: dtv Verlagsgesellschaft; Auflage: 55, 2017, ISBN 3423050074.

Author:

¹doc. JUDr. Roman SVATOŠ, Ph.D. – University of South Bohemia in České Budějovice Faculty of Health and Social Studie Protection, Czech Republic.
e-mail: rsvatos@zsf.jcu.cz