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Comprehensive System of Post-Accident Care in the Czech Republic - A Qualitative Study

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ABSTRACT

Any traffic accident has the potential to be a traumatic event and can lead to significant disruption of psychological integrity in those affected. The impact of a road traffic accident can negatively affect the quality of mental and physical health and secondarily interfere with many areas of social life. This qualitative study reveals the functional aspects and limitations of the current system of post-accident care in the Czech Republic and can thus serve as one of the baseline materials for innovation and improvement of the domestic system of care for people involved in traffic accidents. Any traffic accident has the potential to be a traumatic event and can lead to significant disruption of psychological integrity in those affected. The impact of a road traffic accident can negatively affect the quality of mental and physical health and secondarily interfere with many areas of social life. This qualitative study reveals the functional aspects and limitations of the current system of post-accident care in the Czech Republic and can thus serve as one of the baseline materials for innovation and improvement of the domestic system of care for people involved in traffic accidents.

Keywords: Human factor, Traffic accidents, Psychological care, Post-accident care in the Czech Republic, Qualitative analysis

INTRODUCTION

In 2022, the Police of the Czech Republic investigated a total of 98,460 traffic accidents in which a total of 24,186 people were injured, and 454 people lost their lives. The estimate of material damage resulting from traffic accidents exceeded CZK 7.5 billion (over 344 million US$) in 2022 (Police of the Czech Republic, 2023) (Police Presidium of the Czech Republic, 2023). Concerning the consequences of traffic accidents, it is also necessary to consider the impact on the psychological state of the people involved. A severe traffic accident is our Euro-American society's most common traumatic event. These events contrast the natural conception of the world as a safe and predictable system. Experiencing a severe traffic accident can lead to a disturbance in psychological integrity in many people, with 25% to 36% of cases developing mental disorders (Matsuoka et al., 2008; O'Donnell et al., 2004; Mayou & Bryant, 2001). The most common mental disorders that develop as a result of

experiencing a car accident are post-traumatic stress disorder and depressive disorder, as well as specific (isolated) phobias following a car accident, generalized anxiety disorder, adjustment disorders, and substance abuse (Bryant & Harvey, 1995; Butler et al., 1999; Van Etten & Taylor, 1998; Ursano et al., 1999; Wiederhold & Wiederhold, 2010). These psychological impacts of traffic accidents also significantly affect social functioning and may also manifest themselves at the level of somatic difficulties (Raboch & Zvolsky, 2001). However, the impacts of traffic accidents do not only affect those directly affected but also their families and witnesses of the event. People affected by a traffic accident and their relatives have a wide range of short, medium, and long-term needs that fall under medical, psychological, social, and legal care. These needs vary individually and change over time (Booms, 2018a).

In recent decades, the society-wide impact of traumatic events has sparked interest from the professional community in studying effective strategies for the psychological support of affected persons. Considerable focus was also given to the possibilities of immediate and short-term intervention to be provided in the first hours or days after the event. These interventions are primarily aimed at reducing acute stress, stabilizing affected individuals, and preventing the development of subsequent mental disorders (Bryant, 2016). A vital aspect of the short-term intervention is providing information regarding the circumstances of the accident, the investigation process, one's rights, and the possibility of compensation, as well as connecting affected persons with aftercare institutions (Booms, 2018b).

From a systemic point of view, primary psychological care is provided to people involved in traffic accidents by members of the integrated rescue system of the Czech Republic, i.e., units of the Fire Rescue Service, the Police, and the Medical Rescue Service, which are trained in various degrees in the area of immediate crisis communication. One of the competencies of the incident commander is the option to summon a specially trained interventionist to the scene of the accident (Fire and Rescue Service of the Czech Republic, 2015) (Typical activities of IZS units in providing psychosocial assistance).

Follow-up care for people involved in traffic accidents needs to be conceptually (systemically) established; various public and private organizations or private entities may provide appropriate services.

In the Czech Republic, there is a network of crisis centers providing outpatient assistance and residential services or assistance via telephone or the internet. A multidisciplinary team, usually consisting of psychologists, social workers, doctors, and health professionals, works in a crisis center. Other professionals (e.g., lawyers and church workers) may work closely with this team. Crisis centers are located to varying degrees in several regional cities of the Czech Republic, and most of the services provided to clients are free of charge (Špatenková, 2011).

Another option is to seek the services of clinical psychologists working in hospitals, rehabs, ambulatory care facilities, or as private health care providers whose services are covered by public health insurance (Baštecká & Mach, 2015). Last but not least, car accident victims can use the services of organizations focusing on the care of the bereaved. They can use

probation and mediation services, Czech Association of Traffic Accident Victims (ČSODN), psychotherapists, and attorneys working in private

METHODS

From November 2021 to May 2022, 41 individual semi-structured interviews were conducted with experts in short-term (first psychological aid, crisis intervention) and long-term (therapy, psychosocial counseling) post-accident care. The experts were selected by the method of purposive sampling in order to cover the issues of post-accident care in all their areas applied in the Czech Republic. Their participation in the interviews was remunerated for 1500 CZK ($62). An overview of the respondents according to their professional focus is presented in Table 1. The interviews were conducted by psychologists who have long been involved in issues of aftercare and therapy.

The interview scenarios were designed to provide a deeper understanding of the issue of post-accident care in the Czech Republic, to map the system's individual components, and to understand the specifics and limitations of the work due to systemic deficiencies. At the same time, they aimed to provide comprehensive information on proven practices within the Czech Republic that are worth drawing on in the future. The research question was therefore

Table 1. Respondents according to their professional focus.

Interview number	The professional focus of the interviewees
R1, R25, R34	public transport company psychologist – work organization of the center, diagnostics, psychological and post-accident care (including crisis intervention), long-term therapeutic work with drivers
R2, R37	formerly a psychosocial counselor, now coordinator of preventive programs in a voluntary association – support and assistance to victims of traffic accidents, grief counseling, psychological and psychosocial support, therapy,
R3, R4, R5, R6, R27, R28, R29, R30, R35, R36, R40	psychologist of the Police of the Czech Republic - staff psychology, counseling, training, care, and crisis intervention for employees and the public in case of emergencies
R7, R10, R13, R14, R15, R20, R38, R41	psychotherapist in a private psychotherapy center
R8, R11, R19, R26	Probation and Mediation Service worker – preparatory proceedings before the court decision
R9, R18, R 23, R39	hospital psychologist – ambulance and crisis intervention in the ICU
R12, R21, R22	Emergency Medical Service Psychologist - specialization in crisis intervention, first psychological aid for paramedics and emergency service staff and the public, training of peers and medical interveners
R16, R17, R31, R32	Fire Rescue Service Psychologist
R24	a psychiatrist at the psychiatric clinic of a university hospital - acute psychiatric care, a low-threshold facility with 24-hour service
R33	interventionist and peer in the psychosocial intervention team of the emergency service

posed very generally: what is the current nature and practice of post-accident care at the individual and system level? A detailed description of the semi-structured interview items (long-term therapy version) is presented in Table 2.

The interviews were primarily conducted online or over the phone (due to the covid-19 epidemic); some were also face-to-face. The usual interview

Table 2. Semi-structured interview descriptions.

Set No.1	Your workplace and your clients • What is the job description of your position and your workplace? • What is the ratio of clients after a traffic accident (on the job and in person) • How do clients find you? Who initiates the visit? (The clients themselves, their relatives, etc.) • What are the client difficulties you encounter in your practice? Respectively, what brings your clients to you after a traffic accident? (The consequences of physical injuries, nightmares, loss of will to live, etc.) • How long after a traffic accident do clients come? Moreover, what is the average number of sessions you have? (Immediately after the traffic accident or after a longer time interval.) • Is there anything that connects your clients after a car accident? What do they have in common? • Do you observe any types of comorbidities in your clients after a traffic accident? • Do you encounter any drug abuse in these clients? • Do you encounter any psychosomatic difficulties in these clients? Alternatively, chronification? • Are these clients of yours under the care of a physician due to the difficulties they are dealing with or are they being treated with psychopharmaceuticals?
Set No.2	Your procedures when working with clients • What procedures do you use when working with clients after a traffic accident? Is there anything that has worked reliably, and what has yet to? • How important are a client's personal history and personality in post-accident psychological care? • Do you use psychodiagnostic methods in your work with clients after a car accident? • Do you conduct a PTSD diagnosis when working with clients after a car accident? • Does your approach differ when PTSD/phobias/depression/psychosomatic difficulties are present? If so, how?
Set No.3	Systemic approach • What is missing/not well done in the Czech Republic in the field of psychological post-accident care - "blind spots" in the system? • What is done well in the Czech Republic? • The idea of how to interconnect the system of psychological post-accident care to make it more efficient • What else needs to be added?

length was approximately 60 minutes. With the consent of all communication partners, interviews were recorded. Recordings of the interviews were transcribed verbatim in Microsoft Word and then analyzed using thematic analysis. The qualitative analysis software Atlas.ti was used for partial coding. Open coding was used for the analysis, with a step-by-step refinement of the individual themes. The individual codes and themes defined in the text were transcribed and grouped in Microsoft Excel.

Following the expert interviews, three focus groups were subsequently conducted, composed of experts in post-acute care. Their purpose was to obtain additional information needed to understand post-acute care relationships in the Czech Republic and its further development. A total of 17 people participated in the focus groups and were recruited for the research using a purposive sampling method. Two moderators led the discussion, and one observer also participated. The questions that were discussed are presented in Table 3.

Table 3. Discussed questions.

Set No.1	Introducing oneself in relation to the way I work with those involved in traffic accidents
Set No.2	The issue of the continuity of services, their interconnection, and closer cooperation What would each of you find specifically helpful, in relation to the continuity of post-accident care overall, to be able to do your job in a way that you are most satisfied? What do you as a professional need in relation to connectivity to feel fully enabled to do this kind of work?
Set No.3	Suggestions for solutions - Lack of awareness of the existence and form of follow-up services
Solution No.1	***Awareness campaign:*** what do you think it should be like, based on your experiences? What practical information should it contain?
Solution No.2	***Informative website:*** how should it be designed to be helpful for you? What kind of sections/information?
Set No.4	Non-intervention aspects - providing information and advice in social, legal, and health matters + role of self-help groups - purpose, integration, community.
Optional modules	People who have slipped through the cracks, the problematic nature of dual-role psychology, regional variations in medium-term care...

RESULTS

Based on interviews with experts, a shift forward in the overall concern for the psychological state of road accident participants was noted compared to the past. The Integrated Rescue System has a significant role to play in the field of post-accident care. In particular, systematic educational activities are carried out within these units, which increase the motivation and

quality of the psychological care provided by the intervening units. Establishing intervention teams within hospital facilities was identified as an essential step in terms of short-term psychological care for physically injured persons.

Several experts see the limitations of the current form of short-term care in the fact that intervention at the scene of a traffic accident is mainly provided to victims of serious traffic accidents who show obvious signs of traumatization. The assessment of the situation regarding contacting a crisis interventionist is based on objective criteria of the severity of the traffic accident, which the police patrol or the incident commander most often assesses. In this respect, there is, therefore, a risk that psychological care will not be available, for example, to those involved in less serious accidents who are at the relative risk of psychological traumatization. People who have caused the accident are also a neglected and stigmatized group.

A significant deficiency in the current system relates to the availability of follow-up care. The individual workplaces are unevenly spread over the territory; in the case of psychological care covered by health insurance companies, clients face long waiting times or financial demands in the case of private care. The experts interviewed agreed that some potential clients are not reached by the post-traumatic care system also because there is a general lack of public education about mental health, the potential impact of a traumatic event, and the possibility of using post-traumatic care.

The results of the data analysis also resulted in several recommendations for improving the current situation. These recommendations can be divided into three groups. The first set concerns the training of professionals who encounter people involved in traffic accidents during the investigation and compensation process. Incident commanders should be trained to identify people in need of assistance reliably. The second set of recommendations concerns the general education of the public in the form of information materials and campaigns, school lectures, and also in the form of a website, which would comprehensibly communicate the potential psychological impact of traffic accidents as well as provide relevant contacts for aftercare options. The third set of recommendations focused on strengthening the cooperation of health insurance companies in terms of medium- and long-term psychological care.

CONCLUSION

The qualitative analysis of the collected data revealed the functional aspects of the current system of post-accident care and, at the same time, pointed out its deficiencies. The activities of the integrated rescue system providing short-term care directly at the accident scenes were identified as highly functional. The system's limitations are the difficulty in accessing follow-up care, the continuity, and the low synergy of the entities providing short-term and long-term care.

In the current form of post-accident care, at the most general level, the problem is the absence of a systemically established and widely communicated concept of post-accident care, which would ensure that care is financially,

time-wise, and geographically accessible. There needs to be more simplicity and better system integration in terms of continuity and follow-up of care.

DISCUSSION

The results of the present study showed functional aspects, deficiencies, and recommendations in terms of the existing system of post-accident care in the Czech Republic. The analysis shows that short-term post-accident care in the form of an integrated rescue system, which provides acute psychological care directly at the sites of traffic accidents, is highly functional and systemically interconnected. In sharp contrast to this is the situation of medium- and long-term post-accident care, where a systemically anchored offer of follow-up services needs to be revised. Long-term care is unsystematized, generally difficult to access, and with no direct link to acute care.

Intersectoral cooperation is the key to systemic assistance to people involved in traffic accidents. Despite its importance, its implementation is a recurring problem not only in the Czech Republic but also in many other European countries (Herbert et al., 2015). The national initiatives operating in the Netherlands (Slachtofferhulp Nederland), France (Le Conseil national de l'aide aux victimes - CNAV), and the Flemish region of Belgium (Staten-Generaal voor een betere opvang en begeleiding van verkeersslachtoffers), developing intersectoral assistance to victims of traffic accidents at a political level, can serve as inspiration for addressing the lack of a unified, centrally administered and interconnected system of all components of post-accident care. In addition to national and regional initiatives, local authorities can also develop policies to strengthen cooperation between the involved parties. As these involve local agents rather than national ministries and organizations, the policy developed can be much more specific and detailed, but on the other hand, also less binding (Booms, 2018b).

The Dutch slachtofferloketten ('victim counters'), which brings together representatives from the police, prosecutors, and Victim Support in the Netherlands, is an interesting initiative to help victims of crime, including victims of serious traffic accidents. Here, clients can obtain information on criminal proceedings and the compensation process. Psychological care is also available. In France, efforts are underway to create a similar initiative to help road accident victims at the level of healthcare facilities (Booms, 2018b).

In terms of intersectoral cooperation, the way in which contacts are passed on is also crucial. The European Union Agency For Fundamental Rights (FRA) 's final report identified the handover of contacts to aftercare services by intervening units as a cornerstone of support for people affected by a traffic accident (FRA, 2014). Current studies show that communicating relevant contacts is crucial in this respect. Simply informing victims about where they can reach out to in case of need is often not enough. As a result of experiencing a traffic accident, people often feel overwhelmed by their feelings, resulting in a rather passive attitude toward seeking follow-up help (Booms, 2018b).

Regarding transferring contacts to aftercare services to those affected by a road accident, two approaches can be distinguished between European countries. The first is the so-called opt-in model, where the intervening authority individually assesses the event and the usefulness of follow-up care for the affected persons, who must then initiate contact themselves (Victim Support Europe, 2014). The current system in the Czech Republic could also be described as an opt-in model, where a police officer or firefighter at the scene of an accident hands a leaflet with the necessary contacts to the affected persons. The second approach is the so-called opt-out model, which research shows to be more effective (Christie et al., 2007). In this case, the intervening authority asks the affected persons if they can forward their contact to the helping institutions, who then initiate the contact themselves. For example, in the Netherlands, 89% of contacts between victims of crime (including serious traffic accidents) and helping organizations were arranged through an opt-out system (Booms, 2018b).

In the report on best practices in an interdisciplinary cooperation of the 'Victims of road traffic offenses' project, the work of victims' associations for different types of traumatic events is also highlighted. Each group of victims is unique and has its own specific characteristics, which is why peer support from affected people who have been through a similar experience is invaluable. Victims' associations are better able to advocate for the rights of their clients, offer targeted psychological assistance, and at the same time, play an important role in raising awareness of the whole issue (Booms, 2018b). This is one of the strengths of the Czech system of post-accident care, within which the Czech Association of Traffic Accident Victims (ČSODN) has long established itself. The primary activity of the ČSODN is to provide mainly psychological care and support the interests and rights of victims of road accidents. At the same time, it also aims to reduce the number of serious traffic accidents and strengthen road safety (Czech Association of Traffic Accident Victims, n.d.).

The final (summary) report of the above-mentioned European project draws attention, among other things, to the lack of social support for people affected by a traffic accident from their immediate surroundings. The general public may belittle the consequences of traffic accidents and thus promote the risk of secondary victimization. Consistent with these findings, the conclusions of our qualitative analysis also identified the promotion of outreach activities targeted at the wider public as one of the recommendations (Booms, 2018a).

LIMITS

However, it is also necessary to mention some of the weaknesses and sources of potential errors in the research presented here. The substantive deficiencies may be related to certain limitations on the part of the size of the research population or the absence of several professional facilities that would meet the criteria for inclusion in the research. Despite the effort to include all professions involved in the study, it is possible that some professionals did not participate in the interviews, for example, due to the high workload.

Nevertheless, given the repetitive information for most questions, there was good data saturation. In terms of methodology, the quality of the research may have been compromised by the inherent characteristics of the research instrument itself - the semi-structured interview. However, the utmost care was taken in its preparation and execution, and all the recommendations made by, for example, Hendl (2016) or Miovsky (2006) in their monographs were followed.

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