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The POIPAT Method and Its Usefulness in Cold-Case Investigations

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Purpose:

The purpose of this paper is to present an elimination method called the POIPAT and demonstrate its usefulness in eliminating suspects in cold-case investigations.

Design/Methods/Approach:

The paper presents a SWOT analysis of the POIPAT method that considers the strengths, weaknesses, opportunities and threats connected to cold-case investigations.

Findings:

The POIPAT is mostly used in cold homicide cases to, with the help of a compiled questionnaire, assist investigators eliminate suspects by evaluating and arranging them on levels of importance. The more points a suspect gathers, the more likely they are the perpetrator. The method's advantages include the effective use of resources, the focus on the most likely perpetrators, and the questionnaire's objectivity. The biggest deficiencies are possible subjectivity in determining the importance of the elements and lack of knowledge of the method, together with the use of a questionnaire that is not adapted to the Slovenian situation. While the method is promising and useful, it only holds heuristic value.

Research Limitations/Implications:

The limitations mainly lie in the lack of literature that might facilitate a better SWOT analysis of POIPAT. In the future, it would be useful to perform a study to determine the cognitive value of the analysed POIPAT.

Practical Implications:

The paper's findings enable an insight into POIPAT's usefulness as one of the methods available for cold-case investigations.

Originality/Value:

This paper is one of just a few to mention the POIPAT method. It is intended for anyone interested in this subject, with police officers and criminal investigators being particularly in mind.

UDC: 343.98

Keywords: cold cases, investigation, persons of interest priority assessment tool, POIPAT, profiling, SWOT analysis

Metoda POIPAT in njena uporabnost pri preiskovanju nerešenih umorov

Namen prispevka:

Namen prispevka je predstaviti metodo eliminacije POIPAT in prikazati njeno uporabnost pri eliminaciji osumljencev pri preiskovanju nerešenih umorov.

Metode:

V prispevku je predstavljena SWOT analiza metode POIPAT. Analizirane so prednosti, slabosti, priložnosti in nevarnosti, povezane s preiskovanjem nerešenih umorov.

Ugotovitve:

Metoda POIPAT, ki se večinoma uporablja pri nerešenih umorih, je metoda eliminacije, kjer preiskovalci s pomočjo sestavljenega vprašalnika točkujejo osumljence in jih razporejajo po stopnji pomembnosti. Osumljenec z najvišjim seštevkom točk je najverjetnejši storilec kaznivega dejanja. Prednosti metode so učinkovita uporaba sredstev, osredotočanje na najbolj verjetne storilce in objektivnost vprašalnika. Največje pomanjkljivosti pa možna subjektivnost pri določanju pomembnosti elementov in nepoznavanje metode ter neprilagojenost vprašalnika za slovenske razmere. Metoda je obetavna in uporabna, a ima le spoznavno vrednost.

Omejitve/uporabnost raziskave:

Omejitve so predvsem v pomanjkanju literature, s pomočjo katere bi lahko naredili kvalitetnejšo SWOT analizo metode POIPAT. V prihodnje bi kazalo narediti raziskavo, s katero bi ugotavljali spoznavno vrednost te metode.

Praktična uporabnost:

Ugotovitve prispevka omogočajo vpogled v uporabnost metode POIPAT kot ene izmed metod preiskovanja nerešenih umorov.

Izvirnost/pomembnost prispevka:

Prispevek je eden izmed redkih, ki obravnava metodo POIPAT. Namenjen je preiskovalcem nerešenih umorov in drugim, ki jih tovrstna tematika zanima.

UDK: 343.98

Ključne besede: nerešeni umori, preiskovanje, prioritetni seznam osumljencev, POIPAT, SWOT analiza

1 INTRODUCTION

Cold cases are situations where investigators have exhausted all their leads and have had no new directions for a long period of time (Heurich, 2009). The investigators therefore lack vital information about the case and the offender and his/her relationship with the victim/s (Quinet & Nunn, 2014). Common reasons for the occurrence of cold cases are the lack of evidence and resources, the shortage of time, mistakes made during the process, unfamiliarity with procedures, negligence, and an absence of knowledge (Maver, 2007; Pettem, 2013).

Cold-case investigations of homicides are subject to the availability of investigators, financial resources and especially possibilities concerning the discovery of new evidence. For example, 80 years after an act of homicide has been committed, there is a really minor possibility of investigators finding any new evidence mainly because the offender and possible witnesses have most likely already died (Hughes, 2015). The first 72 hours are quintessential in a homicide investigation, forcing investigators to work quickly and efficiently. On the other hand, time is on the investigators' side when investigating cold cases because many things can change over time. In some cases, physical evidence found at the crime scene at the time can only be analysed today due to advances made concerning DNA that can establish a burden of proof against a certain suspect (Stare, 1998). Relations can also change in time with former friends becoming enemies, witnesses no longer being in fear (perhaps the suspect has died, encouraging witnesses) and offenders can also start talking or bragging about an offence they committed (Regini, 1997). The victim's relatives have often still not given up and continue to apply pressure to the police and hire private detectives, which can often help in solving the case (Maver, 2012).

An investigation of a cold case that occurred several years ago requires precision from the investigators, another careful read through the case file, all of the photographic documentation, the autopsy report and photographs and interviews with the investigators who had been in charge of the case (Stare, 1998). They must acquire the maximum possible information about the victim/s, do a background check on all persons of interest who were in anyway connected to either the victim/s and the offender, contact the family of the victim/s and try to include them in the investigation and re-do the interviews with the key witnesses and eyewitnesses if they are still alive and can be contacted (Pettem, 2013). The investigators must also know the whereabouts of the suspects and if anything has happened in their life which might encourage any of the witnesses to talk (Schuster, 2008). It is necessary to check all unidentified fingerprints in a dactyloscopic database, look for traces of possible DNA, obtain DNA and fingerprints from the suspect and, if possible, see the crime scene. A revisit to the crime scene can give the investigators a better visual sense of the scene of the crime and the crime itself, even though the scene might look quite different due to the passing of time (Stare, 1998). The investigation's goal is to check all of the statements, compare them and determine whether any inconsistencies appear, check if any of the old evidence can be analysed with new methods, while simultaneously trying to find new evidence to successfully complete the investigation.

A crucial aspect investigators must focus on while investigating a cold case is the offender and every person involved in the case. In some cases, there are many suspects and investigators must know how to eliminate the most improbable ones and concentrate on those more likely to be the offender. This process is called the elimination or priority ranking of the suspects. Such ranking of suspects is a common practice in all areas of law enforcement and is undertaken by investigators and other personnel based on the available information and by applying their individual and collective experience and intuition (Phillips & Pohl, 2018). Many methods aim to help with the process. Snook, Wright, House, and

Alison (2006) describe how so as to identify offenders investigators typically focus on either behavioural information collected at crime scenes to produce a profile of an offender's likely characteristics, or crime locations to predict geographical areas that may contain an offender's residence. Homicide offender typologies tend to determine how crime-scene behaviours cluster along some psychological constructs and may provide valuable information for prioritising suspects (Adjorlolo & Chan, 2017).

The Royal Newfoundland Constabulary established a Criminal Behaviour Analysis Unit which provided an offender profiling service developed according to well-documented academic research which, by applying certain procedures, could analyse offender data and thereby provide investigators with a list of suspects in priority order (Adderley & Musgrove, 2001; Beek, Eshof, & Mali, 2010). Suspect ranking and prioritising is now used while investigating all sorts of offences. One example is a burglar prioritisation model (Goodwill & Alison, 2006), while another is a prioritisation tool for investigating indecent-image offenders KIRAT,[1] which concentrates on evidence for suspect prioritisation by suspects' risk of committing contact offences against children (Long, Alison, Tejeiro, Hendricks, & Giles, 2016).

One method/technique that is useful in cold-case investigators is Behavioural Investigative Advice [BIA],[2] which may be seen as a modern term for offender profiling.[3] BIA can aid an investigation by reducing the time spent on irrelevant suspicions and by providing an evidence-based approach for making investigative decisions (Alison et al., 2011). BIA products include the provision of advice relative to crime-scene assessment, predictive offender profiling, prioritisation of persons of interest, generating of hypotheses, and linking of offences (Cole & Brown, 2014). Always on the lookout for ways to reduce or eliminate the number of suspects in a SISC[4] case and a forensic system, investigators can automatically lower the number of suspects on their list and prioritise them by categorising attributes of the usual offenders in the database by use of multivariate statistical analysis (Taha & Yoo, 2018). Another technology in use today is Language Models that are successfully applied to the problem of analysing crime descriptions from a police database for the purpose of prioritising suspects for an unsolved crime, given details of solved crimes (Bache, Crestani, Canter, & Youngs, 2007). Yokota, Fujita, Watanabe, Yoshimoto, & Wachi (2007) developed a profiling system which stores information about offenders' previous offences. After inputting the details of an unsolved case, each previous offender found in the system receives a probability score and the system then ranks them based on the results and the prioritising of the highest-ranking offenders.

1 *The Kent internet risk assessment tool [KIRAT] is a risk prioritisation tool that applies to individuals suspected of possessing, making, taking and/or distributing indecent images of children (Long et al., 2016).*

2 *Behavioural investigative advice [BIA] is offender profiling which includes decision support given to investigators (Alison, Goodwill, Almond, van den Heuvel, & Winter, 2011).*

3 *Offender profiling is based on theories that are uncertain at best and little research has been made to assess the actual validity of the profiles (Chifflet, 2015). Investigators should be careful when considering whether the development and use of profiles, or the use of external consultants to provide such services, is justified (Devery, 2010).*

4 *SISC – system for shortlisting suspects (Taha & Yoo, 2018).*

A useful method for eliminating suspects that will be discussed below is the Persons of Interest Priority Assessment Tool [POIPAT] which points to the most probable suspects in a homicide case, encourages new ideas and directs the investigators (Wilson, 2012).

2 METHODS OF RESEARCH

In the period between 20 February and 10 May 2019, 12 databases (WOS, SAGE, Scopus, JStor, PsycARTICLES, Wiley Online Library, Scholar.google, UM:NIK, Cobib.si, Academic Search Complete, EMERALD and SpringerLink) were examined using 11 keywords,[5] to find references for the present paper. Besides Larry Wilson's book on the POIPAT (Wilson, 2012), we only found two documents which relate to the method. The first is a master's thesis mentioning the method that was found by Google Scholar. The second is an article that compares different suspect-elimination methods, including the POIPAT, which was found by Scholar.google and UM:NIK. The other publications we found (17)[6] relate to similar methods and forms of research to the POIPAT, but do not mention the method. We also searched for other articles under the name Larry Wilson, but found nothing. Our database sweep allows us to speculate that the POIPAT is not an object of great interest from the point of view of publications but, because the analysis of the Slovenian case by Maver, Miklič, and Frangež (2013) shows the method is promising and useful, we intend to analyse it further in this article. We shall rely on insights arising from the so-called SWOT analysis, which usually focuses on the strengths, weaknesses, opportunities and threats within an organisation (Sammut-Bonnici & Galea, 2015), although in this article we shall use it to discover the strengths, weaknesses, opportunities and threats connected to the POIPAT and its usefulness for criminal investigations of cold homicide cases. The lack of relevant literature is the biggest limitation of the paper. Another limitation is that other important articles and research about the method were perhaps not found using the given keywords, but might be found while using different keywords.

3 THE PERSONS OF INTEREST PRIORITY ASSESSMENT TOOL

The POIPAT method was established by the Canadian investigator and analyst Larry Wilson. He conceived of the method in 1992 in Ontario, Canada, where he had participated in a high-profile homicide case involving two teenagers when the investigators had a couple of thousand persons of interest [POIs][7] because they had used multiple strategies in their investigation process. Due to a shortage of investigators, most of the POIs had been assigned to Wilson, who then created the

5 *Keywords included POIPAT, Larry Wilson, and different combinations of words: person, interest, prioritization, suspect, system, elimination, tool, profiling, large, number, assessment, ranking, and evaluation.*

6 *The number of unique articles we found in all databases, without repetitions.*

7 *Wilson (2012) describes persons of interest [POI] as "potential" suspects.*

first trial system for ranking persons of interest. Through a background search, he collected information about each POI and arranged them, according to that information, on three priority levels 1–3, where level 1 contained POIs with high priority and level 3 those with the lowest priority. In October 2003, the KARE project[8] was formed to investigate various homicides of prostitutes in Alberta when the investigators encountered similar problems as in 1992 so the project members contacted Wilson who then created a method specifically designed for their situation. This method was eventually renamed the POIPAT, and allowed the KARE project to identify and evaluate hundreds of POIs in the following years (Wilson, 2012).

The POIPAT is a risk management system designed to utilise investigative resources (Maver et al., 2013). It is an objective system of assessing the probabilities of POIs and comprises a series of questions that are relevant to each individual investigation and are weighted based on how important they are for the investigation. Each POI is assessed based on answers given to the questions and points are awarded for all positive responses, where those POIs who have the highest final score and thus the highest priority have the greatest likelihood of being responsible for the offence. Since no investigation is ever the same, there is no universal questionnaire which can be applied to every case, explaining why a unique questionnaire should be created for each case in order for it to be effective. The same POIPAT could be used in multiple investigations when it is believed the same offender is responsible for the offences being investigated, e.g. a serial killer. Investigators must create a document for each POI in an investigation that contains the POI's background search, links to the victim/s, their characteristics and other relevant information, although it is noted that investigators do not always have access to all the necessary information regarding all suspects and this might affect the final scores. The questionnaire can be created by anyone who is part of the investigation, but the best person for formulating it is the one holding greatest knowledge of the case. When the information has been gathered and the questionnaire prepared, all of the POIs must be assessed, points assigned to them, their total scores calculated and then allocated to one of the three priority levels. The results and questionnaires should then be returned to the main investigator who diverts most of the attention and resources available for the investigation towards the most likely suspects (Wilson, 2012).

The method is used for the most serious offences, such as homicides and missing persons, when investigators encounter various POIs and must handle matters rationally and efficiently due to the limited time, material and human resources (D. Maver, interview, 22 August 2016). The POIPAT enables investigators to first focus on those POIs who are most likely to be the offenders, while also reminding them not to neglect other POIs and important data. Investigators must be careful to not only target the high priority POIs because their 'tunnel vision' might produce negative effects for the whole case (D. Maver, interview, 22 August 2016). Ranking POIs by priority is not new in homicide investigations because investigators involved in a case with multiple suspects have long decided which

8 *A project formed in October 2003 in Canada to investigate a series of homicides in Alberta. It is today a model which strives to minimise the risk of murder of vulnerable missing persons (Wilson, 2012).*

suspects are the most probable offenders based on the evidence gathered and sometimes also their own intuition (Wilson, 2012). Such approaches may serve investigators well, but a problem can emerge in high-profile investigations when investigators encounter a large number of POIs that make the establishing of a priority ranking more difficult (Wilson, 2012). This may be especially crucial in cold cases where a fresh insight is essential. The POIPAT can benefit cold-case investigations by gathering new ideas, perspectives and discussions about the case (Maver et al., 2013).

4 CONSTRUCTION RULES FOR THE POIPAT ELEMENTS

The POIPAT method requires that a questionnaire containing questions referring to the offender in the case is created. The person responsible for formulating it and those who then complete it must correctly follow certain rules and guidelines. Since all investigations are unique, every POIPAT should also be unique and reflect the special elements of the investigation. It is very important that, when investigators re-open a cold case, they take another look through all of the suspects and POIs and perhaps identify new POIs. They must then carefully examine the background of each POI and recognise elements which may suggest the person committed the offence. It is vital that the person designing the questionnaire adheres to the following main principles and rules (Wilson, 2012):

1. Inferences

Investigators usually do not know the offender's identity when investigating a homicide case and must therefore draw conclusions about the offender based on inferences. Inferences are simply 'educated guesses' and can range from weak to strong. An example of a weak inference is that the offender is 'a night owl' since the victims were murdered at night, while an example of a strong inference is that the offender has access to a specific type of vehicle because investigators found traces of that type of vehicle at the crime scene.

2. Source and number of elements

When choosing which elements to include in the POIPAT questionnaire, the designer must first consult all members of the investigative team. The questionnaire needs to have a limited number of elements because each element requires investigators to run a background check on all the POIs. This is especially significant when there are many suspects. The number of elements should be around 30 or less, and completion of the questionnaire by each POI should not take more than one day. If a profile of the offender has already been created, that could be useful to consult when creating the POIPAT questionnaire because it can allow a good insight into the offender's personality and his/her possible intentions. However, Wilson (2012) warns that one must tread carefully while using a criminal profile as a source since its value might be low due to insufficient evidence or possible subjectivity.

3. Objective and subjective elements

The questionnaire elements should be designed as objectively as possible and therefore should not be influenced by the investigators' opinions or feelings. The questionnaire must be reliable, meaning it must be created so that different

evaluators can come to the same results. An example of a subjective element is the height of the offender because height may be determined in various ways by different individuals. A subjective element would say something like "the offender is very tall", but if written in an objective way it would be more like: the offender is at least 180 cm tall or higher. Every POIPAT must contain rules in which the elements are explained further to minimise differences between evaluators and thereby lower the subjective evaluation of the questionnaire.

4. True or false elements

Each element has to be designed so that the only possible answers are "true" or "false", meaning it receives either all or none of the points in the assessment phase. It cannot be designed in such a way that an element is half true and half false because an element cannot be given only half the points allocated.

5. Crucial elements

Crucial elements are those that are extremely important for the investigation and, if any of these elements was regarded as true for one of the assessed POIs, this person is automatically placed in the highest priority rank irrespective of their final score. There should only be a few of these elements in the questionnaire.

6. Element weighting

After consulting all investigation team members, each element should be weighted and assigned a score of between 5 and 50 points. Less important elements should be assigned fewer points and the most important ones the most points. If the elements are useless or completely unimportant for a certain investigation, they should not be included in the POIPAT. The basic number of points is 20, but points must be adjusted to suit the element according to its importance for the case:

- **Unimportant elements:** Elements not benefitting the investigation and the decision on a possible offender. An example of such an element is a speculated personal characteristic of the offender that is hard to verify and depends on a subjective opinion.
- **Less important elements:** Elements that are usually assigned 5–15 points. How many points should be assigned to each of these elements depends on their importance and value for the investigation. There may also be elements that started off as base elements (with 20 points being assigned), but whose value weakened when other factors came to light and were considered in the investigation. For example, an element called "vehicle access" could be less important because it is easy to assume most of the POIs would have had access to a vehicle but, if the element were changed to "SUV access", the element's value would go up, assuming that most POIs did not have access to a SUV.
- **Important elements:** Elements that are assigned the basic value of 20 points. This is the main criterion by which the questionnaire's designer can compare all of the elements and score them with more or fewer points based on their importance. An example of an important element is the offender's connection to the victim/s.
- **Very important elements:** Elements which are usually assigned 25 or 30 points. In most cases, elements should not exceed the basic 20 points,

further explaining why there should only be a few very important elements. One example of such an element is the offender's sexual criminal history with respect to children.

- **Crucial elements:** Elements that are so important in themselves that if found to be true the POI would be placed directly on the highest priority level. These elements should be extremely rare and should be assigned 50 points. An example is an element called "uses prostitutes" in a case where all of the victims were prostitutes.

The weighting of the elements is also influenced by other factors:

- **Availability of data:** If the investigators are having a hard time gaining access to certain data for elements that are not as important for the investigation, they should be assigned fewer points.
- **Frequency of the element within the population:** If the element is frequent within the population, it should be assigned fewer points, and vice versa.
- **Subjectivity of the information:** The more subjective the element, the fewer points that should be assigned to it.
- **Reliability of sources**: The less reliable the source for designing an element, the fewer the points that should be assigned.

7. Establishing priority levels

When the evaluators have completed assessing all of the POIs, the point ranges determining the priority levels should be decided, namely which total scores constitute a high, medium or low priority. This is an important step in the final assessment because the priority levels have a big influence on the order in which the POIs are then ranked in the investigation. The higher the POI's final score, the greater the likelihood they are the offender. The POIs must to be split into three priority levels. The first level constitutes POIs assessed with more than 75% of all the possible points. The second level contains those assessed as having between 25%–75% of all possible points, whereas the third level is for POIs which had a final score of less than 25% of all possible points. Points are never halved and always rounded up.

4.1 Basic elements of the POIPAT

While creating a questionnaire, one can rely on the existing library of basic elements which may be important for an investigation. Wilson (2012) states that because every case is unique not all elements can be relevant to an investigation and that more elements which are specific to the investigation should be added. The basic elements in the POIPAT library are (Wilson, 2012):

- **The Heading**

Each questionnaire must have basic personal information concerning the POI such as first, middle and last name, date of birth and a reference number.

- **Geography**

This represents data which is extremely important for all investigations and includes the locations where the victim and offender lived, worked and frequented. This also includes where the offender made contact or attacked the

victim/s, where the victim was released, escaped or was placed, where important evidence was found or the offender's comfort zone is. The offender's comfort zone represents his/her previous places of residence and places they worked in or visited frequently during the time of the offence.

- **Physical appearance**

Physical characteristics should only be given in cases where it is assumed the offender had special or unusual physical features, which are unlikely to have changed very drastically over time (such as birth marks or tattoos). Problems with physical descriptions lie mostly with witnesses' memory, which can be unreliable and subjective, and the fact the offender's appearance can alter significantly in time.

- **Age**

This is an element whose reliability is small for various reasons, especially in cold cases when assessing the offender's age can prove quite difficult, given that the relevant events happened a while ago.

- **Gender**

Even if investigators do not know the offender's gender, it is almost safe to assume in violent deaths that the offender was male because males are the chief offenders in such cases. The investigators must nonetheless be careful when deducting the offender's gender because a wrong decision can lead them to very wrong conclusions.

- **Race/ethnicity/skin colour**

When considering such features, relying on eyewitnesses can become quite problematic. Such information is not always available also because of their sensitivity, so it is best to avoid including such elements in the questionnaire.

- **Accent**

A person's accent should only be considered an element if it is truly distinct and recognisable and, in that case, should be identified as broadly as possible.

- **Speech characteristics**

Every individual has unique speech characteristics that help other people identify them, although some are even more pronounced like slurring, stuttering, lisping and other abnormalities.

- **Lifestyle**

A person's lifestyle can include information such as alcohol and drug abuse, whether the offender is involved in criminal activities, whether they are a loner or like to socialise, the hobbies they engage in etc. Identifying the offender's lifestyle can be challenging, particularly when the offender is unknown and the investigators do not have any reliable information available. In such cases, investigators must rely on other elements of the investigation to indicate the offender's lifestyle.

- **Marital status**

It is highly unlikely the investigators know or can deduct the offender's marital status at the time of the offence, which is why the element is based more on the availability of POIs than the marital status itself. In a homicide case, the offender needs considerable attention and free time for planning, choosing the victim, committing the offence, disposing the evidence and making other preparations.

The length and frequency of time spent away from home could indicate they are not likely accountable to a partner or may be in a relationship where the offender is very dominant and does not have to justify long and frequent absences. This makes it is reasonable to consider two elements: unattached (single, divorced and separated) and unaccountable (married, but the partner is extremely submissive or passive).

- **Employment**

It is also unlikely investigators know the offender's employment status at the time of the offence, although some aspects of the investigation or some trace evidence might lead investigators to believe the offender works in a certain industry.

- **Education**

Some aspects of an offence or offender's behaviour may indicate the offender's education level, particularly when the offender has left some textual evidence behind. That could, for example, be the style of writing in a blackmail letter or a homemade complex explosive device, which would indicate some engineering knowledge.

- **Criminal history**

It is a generally accepted rule that a minority of offenders is responsible for the majority of crimes, hence there is a good chance the offender already has a criminal history. The possibility of a certain suspect being the offender increases if the person has been involved in very serious criminal offences because offenders do not typically start with the most extreme offences, but slowly progress. For POIPAT purposes, it is not necessary for the POI to have a criminal history because the information can be gathered from other reliable sources such as police reports, informants etc.

- **Links to the victim/s**

There is a good chance that some direct or indirect link exists between the victim/s and the offender, which may be strong and easy to identify or weak and more difficult to prove. The weaker the link between the offender and the victim, the harder the case is to solve.

- **Availability of POIs**

This element addresses the opportunity and availability of the POI to commit the offence. When it is believed the same offender is responsible for multiple offences, the more offences he is available for, the more likely it is that he is the offender. If investigators do not have information about the POI's availability at the time of the offence, it is presumed he was available. The questionnaire designer must determine the range of dates within which it is presumed the offence was committed.

- **Vehicle access**

If the vehicle access element is important for an investigation, it is useful to determine if the offender had access to a vehicle and the vehicle's description. It becomes even more relevant when investigators can determine the vehicle type because that can significantly reduce the list of POIs, especially if the type is particularly rare in a certain residential area.

- **Other elements**

This is the section containing all the elements not mentioned above, but which still seem relevant to the investigation. For example, access to a weapon, history of or documented interest in necrophilia, access to explosive devices or materials necessary for their creation etc.

- **Comments section**

No matter how detailed and exhaustive the questionnaire, there will likely be instances when items in a POI's background not addressed in the POIPAT will be identified that arouse interest in him. Accordingly, at the end of the questionnaire a comments section appears where the questionnaire evaluators can state the information they think would be of interest to the investigators. While not adding any points to the POI's final score, it nonetheless elevates the priority ranking attributed to the POI. An example is a POI who does not own a weapon but has a surprisingly large amount of gun magazines and has downloaded pictures from the Internet showing people being killed with a gun.

- **The End section**

Each questionnaire should have an ending that includes the range of priority points, a place for those people who scored or reviewed the POIPAT, and the dates upon which that occurred. These dates are very important because the POIs are assessed based on information available at the time of scoring. Should any new relevant information come to light, some POIs' scores could change.

5 SWOT ANALYSIS

SWOT analysis assesses internal strengths and weaknesses and external opportunities and threats in an organisation's environment. An internal analysis is used to identify the resources, capabilities, key competencies and competitive advantages of an organisation while an external one identifies opportunities and threats by examining competition and the environment (Sammut-Bonnici & Galea, 2015). SWOT analysis is valuable for determining which actions are needed and helping to focus on minimising the weaknesses while taking greatest possible advantage of the opportunities available (Gürel & Tat, 2017). Building on SWOT analysis, we performed an analysis of the POIPAT from the criminal investigation aspect. Its strengths and weaknesses were analysed based on the criminal investigation of a particular case, while the opportunities and threats in terms of respect for human rights and the usefulness of the method in investigating hot and cold cases. Internal analysis of strengths and weaknesses allows us to determine the method's value while investigating an individual crime, whereas external analysis of opportunities and risks helps determine its validity and reliability.

Strengths

- Mostly applicable to a case with many POIs.
- It eliminates the most improbable POIs.
- It focuses on those POIs who are most likely to be the offender.
- All the POIs are scored on the basis of the same questions.
- A faster way to connect the clues and see things from a different perspective.

- The categories have numerical values where specific categories can be joined with specific policies (Sekela, 2010).
- The questionnaire can always be revised and so can the final score.
- An objective way to achieve a priority ranking.
- The rules are well explained.
- The results can reveal a new direction for the investigation.
- It assists investigators with a decision-making formula.

Weaknesses

- It is a waste of time when not many POIs are involved.
- Creating the questionnaire requires considerable time and a careful examination of the documentation and the POIs in the investigation.
- The questionnaire may include faults that affect the further investigation (too many/too few questions, overly subjective questions).
- The weighting of the elements is subjective and may lead to huge differences and errors.
- The inferences transformed into elements are mostly indirect due to the subjective conclusions of investigators.
- If the inferences about the offender are wrong, the final scores can also be wrong.
- Completing the questionnaire takes a lot of time and errors can occur if the assessing occurs under time pressure,, especially if this process happens at the start of the investigation when the investigators do not have time to complete the questionnaire because they must gather information, making the POIPAT more effective in cold-case investigations.
- Investigators cannot always access all necessary information on all of the POIs, which can affect how they are assessed.
- The questionnaires are assessed by people who are investigating the hot case, which can have an impact on their objectivity.
- It must be adjusted to each individual case, which might entail a waste of time.
- Many of the suggested elements in the library are common. For example, a great many people own a car these days, yet owning a car is one of the elements.
- The categories are somewhat outdated. There is no mention of digital technology in the existing categories in the library of elements.
- It lacks a description of how to collect POIs.
- Specific knowledge about investigative tactics is needed.
- It only has a heuristic and cognitive value and does not count as evidence.
- It is hard for a researcher without practice to create the questionnaire – a group effort should be involved when establishing the questions.

Opportunities

- It is useful when there are many POIs or suspects.
- Useful in high-profile cases.
- It can help organise a case better.
- Applies to both hot and cold cases.
- It can possibly help and give some fresh impetus to some cold cases that have been put on hold.

- Each case requires a unique questionnaire to help investigators focus on important aspects of the case/offender.
- It helps link cases together. For example, based on the characteristics of the offender and suspects, or DNA, which link several cases together.
- The analysis may be useful for acquiring new ideas and holding discussions on the case.
- It builds up teamwork.
- It facilitates investigators' focus and efficiency in cases where there are many suspects.
- Efficiently ensures the proper use of resources (helping to save money and time).
- Any possible errors that might arise due to generalisations can be prevented by individualising the questionnaire.
- The system for creating the POIPAT elements allows the most objective questions possible to be posed.
- Since the questionnaire does not have to be formulated by the investigator, cooperation between researchers and investigators may be promoted.

Threats

- Investigators 'tunnel vision' can be a problem when the investigation ends up focused in merely one direction.
- The questionnaire simply refers to positive clues, not negative ones.
- The questionnaire only refers to incriminating evidence and not to exculpatory evidence.
- Wilson (2012) suggests the offender's profile can be used while creating the questionnaire, but warns about its value for the investigation due to its lack of evidence. Research shows that offender profiling is not a scientifically proven method, calls for caution and gives rise to strong criticism, largely on the grounds that very little empirical research exists (Chifflet, 2015).
- When the gender is unknown, it may be problematic to assume that males are automatically the offenders in violent deaths. Statistically speaking, more men than women commit violent deaths, yet women also commit violent offences.
- The danger of making assumptions when the backstory might be different to what appears. For example, when talking about an explosive body retrieved from the crime scene – it is not necessary that the offender made it himself but perhaps it was a home-made device that was bought on the Internet.
- Assuming that the minority of offenders is responsible for the majority of offences can also be dangerous because it can too quickly direct investigators to POIs with a criminal history and disregard others.
- Since the method assesses a large number of suspects, a danger exists that the process and assessment is too inaccurate.
- A POI may have the highest score in the end but might have a valid alibi. What to do in this case? Could the murder be a contract killing? Would that be perceived from the questionnaire?

- The determining and assessing of an individual element might be subjective if there is no direct evidence.
- Because not much research/literature about the method exists, it is hard to verify the method's validity and reliability.
- It should be adjusted to the conditions in Slovenia for it to function properly.
- The question is whether the method even makes sense in Slovenian conditions and if it is applicable to hot and cold homicide cases in Slovenia.[9]
- Differences in terminology: between "person of interest" and "suspect" in the Slovenian language – it is lawful to investigate and search the background of *suspects*, but does it respect basic human rights if a mere *person of interest* is being investigated?

After assessing the POIPAT and all of its positive and negative aspects, we may conclude that many of the method's aspects can be seen as both negative and positive in certain ways and conditions. It is mostly applicable and useful in cases when a large number of POIs has been identified and it facilitates investigators' focus in such cases. The method can at the same time be a waste of time in cases with few POIs because there is no need for priority ranking. It represents an objective way of ranking priorities and creating elements, but can also be subjective when it comes to weighting and assessing the elements if no direct evidence exists. It also skips a step in POI collection and assumes the investigation has already identified the POIs in question. Creating the questionnaire takes considerable time and so does completing it, while errors might ensue if the assessing is done in a hurry. On the other hand, it supports the efficient use of resources, thus helping to save money and time, letting the investigators focus on important aspects of the investigation, and organise the case. The offender profile can help with those elements representing the offender in the questionnaire, but here the investigators must be careful because it is not a proven scientific method and can provide subjective information. The results can lead the investigation in a fresh direction, which is especially significant in cold-case investigations, but tunnel vision can also be a problem, appearing when investigators focus only in one direction. Investigators must never concentrate on only the highest-ranking POIs. The method must be adjusted for each individual case, which may prove very time-consuming, although having a questionnaire that is unique means the investigators can hone in on more important aspects of the case and address them first. The POIPAT can help link cases together when the same offender has committed several offences. However, it remains uncertain whether the method can be properly applied in hot and cold homicide cases in Slovenia because there is not such a strong need for the method.

9 *In the last 5 years, there have been about 18 homicides and 21 manslaughters on average in Slovenia (Policija, 2019). The murders are usually committed by one-off offenders and there are probably not many cases with a large number of POIs in question.*

6 CONCLUSION

Two investigative situations indicate the possibility of a homicide: the disappearance of a person, where the circumstances show they could be the victim of a crime, and the finding of a corpse (Dvoršek, 2008). Since in such cases the main witness or victim is dead, it is vital to carefully investigate the case and the crime scene and to collect as many statements as possible. When investigators gather data, they analyse it and construct versions or hypotheses relating to the offence and the perpetrator. In the event of a homicide, when there is sufficient evidence and a reasonable suspicion, the investigators file a criminal complaint with the state prosecutor. Investigators sometimes find they have run out of ideas after having exhausted all possibilities of obtaining information and evidence, leaving them unable to find the offender and the case then grows cold (Delakorda & Maver, 2012). Cold cases are usually reopened in the event of new relevant information emerging and the investigation then continues. The process of investigating cold cases is quite different from that for hot homicides. It is especially important that investigators become well familiar with the case and study all of the gathered information and evidence very carefully. Cold cases can have a detrimental impact on the productivity of investigators because they find it harder to focus on hot cases if they know there are cases that have never been resolved and, apart from the families of the victims who may be heartbroken and stressed, there might be resistance from witnesses who are essential to the investigation since the perpetrator is still on the loose (Smythe, 2009). Cold cases are usually investigated by special units for cold-case investigation that apply different processes, strategies and evaluation models in their investigations. One evaluation model or tool for suspect priority ranking is the POIPAT method which places suspects having most in common with the offender's profile in the forefront so that the investigators first consider them. In cases with a large number of suspects, the POIPAT proves to be very useful for eliminating suspects who are the least likely to be the perpetrators of a particular offence. This saves the investigators substantial work and effort in the investigation (Wilson, 2012).

The SWOT analysis found many positive and negative aspects about the method and supported the claim that there are many aspects which may be seen as both positive and negative in certain conditions. The POIPAT yields a numerical value that enables the joining of a specific category with specific policies that accompany the numerical value with greater details in the collection, collation and analysis of homicide cases (Sekela, 2010). The method helps organise and tie cases together while giving investigators focus and direction. It is useful and applicable in cases with many POIs, but is useless and not appropriate when there are very few POIs or suspects because there is no need to rank them by priority. It does not provide a reasoning concerning how to collect POIs and merely presumes the POIs have already been identified in a certain case. This is possibly because the method was developed in response to a certain homicide case that had thousands of POIs already in scope (Sutmuller, den Hengst, Barros, & van Gelder, 2018). It is a way of ranking priorities and tries to be as objective as possible in the process of creating and assessing the questionnaire but it can still also be subjective in some parts.

The weighting of the elements is left up to the subjective opinion and judgement of the person creating the questionnaire. Basic rules are given that describe the appropriate weighting, yet the final decision is left to the creator. The use of benchmark elements in POIPAT makes several items of evidence share the same weight, making the method less discriminating with respect to POIs (Sutmuller et al., 2018). It is otherwise an efficient method ensuring the proper use of resources, helping investigators to save money and time and to initially focus on the most likely suspects and continue from there. While creating it, the questionnaire must be carefully conceived with the help of the whole investigative team, making it easier to determine important aspects of the investigation that point to the offender. The POIPAT designer must be careful while choosing the number of elements and its contents so that no faults are introduced which could affect the further investigation. The library of elements is nicely described and includes many examples of pre-set categories of elements, which are usually important in an investigation, albeit nowadays it could use an improvement. The elimination categories in the basic rules do not explicitly include new classes of evidence such as telecom data and camera footage so the integration of new classes of forensic evidence as pre-set elimination categories could help better discriminate POIs (Sutmuller et al., 2018). Like any similar tool, when used properly the POIPAT assists the investigator or police force of jurisdiction with a decision-making formula (Sekela, 2010). The rules are generally well explained and a template of the questionnaire is available, although it is unfortunately not properly applicable to the Slovenian context. It should be adjusted to the conditions facing Slovenia and redesigned if it is to be properly tested and used.

The POIPAT was first introduced in 2013 to the wider academic public in Slovenia at the 14th Dnevi varstvoslovja conference where Darko Maver, Damjan Miklič and Danijela Frangež presented analysis of a homicide case in Ljubljana and verified the method's usefulness (D. Maver, interview, 22 August 2016). They concluded the method could also be useful and beneficial in the Slovenian context, but it should first be thoroughly studied and then adjusted to Slovenian conditions (Maver et al., 2013). The method has a heuristic and cognitive value, but no evidential value and will therefore not hold up in court (D. Maver, interview, 22 August 2016). For a better understanding of POIPAT and more meaningful results, the method should be tested on a cold case or in a hot homicide investigation where the perpetrator has not yet been found because in that way the researchers could avoid the biased and subjective opinions which may unintentionally arise and obtain objective and valid results (Maver et al., 2013). Aside from the mentioned research, the absence of conducted research, written articles or other analysis coupled with the one study of its usefulness by itself does not provide valid, adequate or satisfactory results, which is ultimately not enough for use in practice. To ensure the method's recognisability and in the hope of investigators trying the method and considering introducing it in their investigative strategies, and testing it on different cases, proper research must be conducted in this field, more articles should be written while it should be presented at as many conferences and events as possible. The method definitely shows promise and may be useful but, until researchers and investigators have opened up their minds and perspectives, one cannot confidently claim it holds any practical value.

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