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'Promoting Good Practices and Standards'

Board of Reviewers

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Editorial Board

Contents

EDITORIAL MESSAGE

The current issue of the Indian Police Journal consists of twelve chapters focusing on the various issues related to the Policing and the readers of the premier Journal across the nation wouldgreatly benefit from this issue.

The Article **"Electronic Evidence in the Indian Courts: A set of Forensic Guidelines for the Police Officers in India"** is an interesting article where usage of electronic evidence in the investigation processin the context of the Section 65B of the Indian Evidence Act has been described thoroughly.

"Do Police in India Control Crimes" is another quintessential article cumcase study where an attempt is made to explore the relationship between the police strength and crime rate in India.

In the article **"Cyber Threat: Indian Railways Perspective"** both the authors have cautioned in prior about misuse of cyber platforms by the non-state actors and the modus operandi used in carrying out the same.

The article **"Organisational Stress and Coping Strategies among Police Personnel: A Study of Chandigarh (U.T) Police"** delves deep into the organisational stress and various facets related to it. It also suggests measures to subdue and counter the same.

"Will Society Let Female Offenders to Lead a Normal Life? A Study on the Perception of Police towards the Challenges in Reintegration of Female Offenders" is an article based on the study where attitudes of the Police Personnel and Society towards the challenges of reintegration of female offenders in denial of job opportunities, negligence from family and society, social stigma, changes in the mental health of the offenders due to prisonization, suspicion from police have been studied.

Through the article **"Application of Appreciative Inquiry in Police"** the writer discusses Appreciative Interviewing (AI) and its positive outcome in the context of the Police in India.

The article **"Integrating Human and Social Media Intelligence for better National Security"** dealsinthe growing significance of Social Media Intelligence (SOCMINT) for law enforcement and intelligence agencies, and it argues the integration of Human Intelligence (HUMINIT) and Social Media Intelligence (SOCMINT) for better national security.

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"Occupational & Organisational Stress on Police: A Discussion on Recent Studies" is another article on Organisational Stress in the Police and its consequences and remedies have been discussed.

In the article **"Police Subculture and its Influence on Arrest Discretion Behaviour; an Empirical Study in the Context of Indian Police",** the writer shows the empirical study on the impact of subculture on arrest discretion behaviour of police in India and its relative significance compared with organisational determinants.

Through the article **"Analysis and Investigation of Clues in Cases of Doubtful/Motivated Allegations/Implication of Rape",** the author analyses 360 degree perspective of issues associated the subject.

"Police Performance Measurement Index" is another rich article which focuses on various aspects of police performance management, such as why police performance needs to be measured, what parameters should be measured, and how these should be measured.

"Samarth - Breaking Barriers, Therapeutic Intervention Program Rationale and effectiveness in Sabarmati Central Prison Ahmedabad, Gujarat" is an article where the writer discusses success of therapeutic intervention programs systematically designed to offenders convicted in the Gujarat Central Prison in India and the correctional measures taken.

The task to carry out the IPJ in time is herculean in nature which was made possible by the Contributors and Editorial team. Hence, I really appreciate and thank the contributors taking the time to write the articles for October-December, 2019 issue. I also express my sincere gratitude to the editorial team who have worked tirelessly to make this issue a reality.

I am also thrilled to announce that BPR&D has entered in its Golden jubilee year and we are soliciting more articles for our Golden Jubilee issue.

The suggestions and feedback on qualitative improvements are welcome.

-Jai Hind

Editor-in-chief

Electronic Evidence in the Indian Courts: A Set of Forensic Guidelines for the Police Officers in India

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Abstract

This article updates the Police officers in India on the cyber evidence in the context of the Section 65B of the Indian Evidence Act. The points raised in this article are expected to serve as a quick reference guide while preparing, processing and presenting electronic evidence in a manner that is admissible to the courts of law in India. The article suggests a few guidelines to follow while presenting electronic evidence in the Indian courts and points out that the legitimacy and authenticity of such electronic evidence may be questioned or invalidated unless its preparation, presentation protocols and relevant features conform to the various provisions prescribed by the Section 65B of the Indian Evidence Act.

Keywords

Electronic Record, Secondary Evidence, Electronic Evidence, Forensic Guidelines, Integral, Automatically, Criminals.

Introduction

There is no doubt that digital technology and cyber space form an integral part of the modern life and today's criminals and culprits often tend to use digital technology while conducting crimes. As a result, whether a case is digital-related or not, modern investigators across the world today often invariably look for digital evidence as well.

Evidence that helps establishing such crimes can very often be found in, through and by means of digital equipment (Bhattathiripad, 2014). Almost all pieces of digital equipment (such as computers, mobile phones, electronic weighing machines etc.) have aninherent and inbuilt capacity to automatically create and store usage details when they are used or abused. Also, almost all pieces of digital products (including databases, images, audio clippings and video clippings) have an inborn capacity to automatically create and store their production-related (and also their manipulation-related) details as part of their source document or transaction logs.

Many such automatically stored digital details can become evidential in various disputes related to or involving such pieces of digital equipment and products. Such digital evidence not only helps establish a crime but also confirms the criminal's involvement in the crime.

Author's Intro:

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Because of all these, the judiciary often expectsreliable, high-quality digital evidence from the cyber forensic experts. Moreover, the judiciary often acclaims and acknowledges through judgments, those digital forensic evidence that are highly relevant, derived by scientific methods, and supported by appropriate validation (Ryanand Shpantzer, 2005).Such an acclaim, for instance, can be clearly sensed and deduced from the judgment (Judgment, 2017)in which there is a detailed narration of the way the Kerala police cyber expert intelligently, scientifically and innovatively used the information relating to around 84 lakh mobile calls in order to trace, locate and catch a clever rapist-cum-murderer (who had conducted the crime without leaving any direct, explicit, physical as well as cyber trace and had travelled 7200 kilometers during the subsequent 40 days of the crime) (Bhattathiripad, 2018).

Objective of this article

This article is primarily meant for those cyber forensic experts and Police officers in India who often deal with electronic evidence in the investigation process and also work with the objective of meeting the judicial expectations mentioned above. This article is expected to serve them as a quick reference guide while preparing, processing and presenting electronic evidence in a manner that is admissible to the court of law in India.

Electronic records as admissible evidence

According to the Indian Evidence Act, the term 'evidence' means anything by which any alleged matter of fact is either established or proved[1]. Evidence can be defined as any material which tends to persuade the court of the validityof the truth or of the probability of some fact asserted before it (Murphy, 1992).

Evidence can either be primary[2] or secondary[3].Also, evidence can be either oral or documentary[4].

Documentary evidence can be in the form of electronic records also(According to the Sec. 2(1)(t) of this Act, *electronic record means data, record or data generated, image or sound stored, received or sent in an electronic form or micro film or computer generated micro fiche.*).

The Indian Evidence Act is very particular that any electronic document can be produced only under the category of primary evidenceexcept under certain exceptional circumstances mentioned in the Sec. 65B of the Act. This circumstance can be made clearer thus: Primary (electronic) evidence is often collected or seized by following the Standard Procedure and also by electronically locking the storage devices of the seized device using a standard Hashing software tool by following sec. 62 and 64 of the Indian Evidence Act. By definition, any original electronic documentsubmitted to the court is destined to fall under the category of primary evidence and is often marked as "Exhibits" by the courts. Moreover, laptops, mobile phones, hard disks, pen drives, CDs, DVDs etc (which are not evidence per se but are suspected / claimed to contain electronic documents with evidential value) are also considered as primary evidence but are often marked as "Material Objects". However, copies of the original electronic documents (for example, records, information or files which are extracted from those electronic storage devices which are produced as primary evidence) are considered only as secondary evidenceand the evidential value of such an extracted electronic document can be proved only in accordance with the procedure prescribed under Sec. 65B of the

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1   See Sec 3 of the Indian Evidence Act.
2   See Sec 62 of the Indian Evidence Act.
3   See Sec 63 of the Indian Evidence Act.
4   See Sec 3 of the Indian Evidence Act. Also, see Hardeep Singh v State of Punjab, AIR 2014 S.C.1400 at p.1419.

Act[5]. In other words, the procedure prescribed under Sec 65B is applicable only in the case of electronic records which are produced as secondary (electronic) evidence.

At this stage, a brief mention of the prevailing irony on the convention of "Exhibits" and "Marked Objects" in the context of electronic evidence would help readers to properly deal with the related issues in the court. By convention, anything that can be "copied" is marked in the court as an "Exhibit" while things like sharp instruments that cannot be "copied" are marked as "Material Objects". And, both parties have every right to get certified copies of all those documents which are marked as Exhibits but neither party has right to ask for a "copy" of a thing which is marked as a "Material object". Ironically, an electronic storage device (which is often submitted or seized with the objective of extracting a document or a file from it and is, by convention, marked as a "Material Object") can, practically, be "copied" and so, by definition, should be actually marked as an Exhibit (with both parties have right to get its copies). Such an irony raises several questions in the Indian Judiciary, many of which still remain unanswered. For example, can the court copy the entire content (including the pieces of data in it which are not related to the particular case) and then give this copy (as "certified copy") to the opposite party? Will it not then amount to violation of the fundamental rights of privacy of the owner of the storage device? A debate on such issues inherent to the judiciary is outside the scope of this article which is on presentation of electronic evidence.

An electronic record presented as a paper document is also admissible if it satisfies section (1), (2) and (4) of sec 65B[6].This does not, however,mean that any computer printout (or computer output) *per se*can be treated as electronic evidence. The Supreme court held[7] that the admissibility of a computer output as an electronic record depends on its satisfaction of the four conditions under section 65B(2)of the Indian Evidence Act (See also Appendix –I) and the person who produces the computer output is expected to give a certificate or a statement that the computer output satisfies the four conditions under section 65B(2) to the best of his / her knowledge and belief.

The minutest aspects of these four conditions are further detailed below in a non-legal language.

Judicial admissibility of electronic records as secondary evidence

The judicial admissibility of the information contained in electronic records presented assecondary evidence depends on several factors. Their judicial admissibility mainly depends on their accuracy, integrity and the reliability as demanded by the Sec 65B of the Indian Evidence Act. In order to achieve maximum accuracy, integrity and the reliability, the Sec. 65B(4) of the Act prescribes that the cyber forensic expert, while submitting a piece of electronic record as evidence, is expected to also give a certificate or a statement which

a. properly identifies the electronic record;

b. generallydescribesthe manner in which these electronic records are produced by the computer or a combination of computers;

c. generally mentions the configuration of all the devices

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5   Anwar P. V. vs. P. K. Basheer, CA No. 4226 of 2012, Judgment delivered by the Supreme Court on Sept 18, 2014

6   State vs. Mohd. Afzal, 107(2003) DLT 385(DB)

7   Anwar P.V. vs. P. K. Basheer, CA No. 4226 of 2012, Judgment delivered by the Supreme Court on Sept 18, 2014

involved in the production of the electronic record by the computer;

d. clearly describes the manner in which these electronic records are extracted by the expert;

e. precisely mentions the configuration of all the devices involved in the process of extraction of the electronic record by the expert;

f. clearly states that *the information contained in the electronic record was derived or was reproduced from the information fed into the computer in the ordinary course of its activities;*

g. properly establishes the degree of accuracy, reliability and the integrity of the evidence produced; and

h. appropriately establishes the qualification and the official position of the expert who carries out the cyber forensic task and who presents the evidence in the court of law.

However, in many cases, practically it is not easy for an expert to certify (b) and (c) above. This difficulty is because the computer in question may not be physically accessible to the expert. In many circumstances, the computer may be accessible to him / her only online. In some other circumstances, only a storage device in the computer may be accessible. When the computer is physically inaccessible to the expert, it is not easy for an expert to certify that *the computer output containing the information was produced by the computer which was used regularly to store or process the information for the purposes of any activities being regularly carried on by the person*

having lawful control over the use of the computer. For instance, although the originality [see (b) and (c) above] of a Call Details Record of an Indian mobile number can be proved with the help of a certificate obtained from the concerned officer of the concerned Telecom Operator (BSNL, IDEA etc.), such a certificate is difficult to obtain from an email operator (GMAIL, YAHOO etc.) in case of an email being produced as evidence. Noticing this inability, the Hon. Supreme court has observed that such a certificate is "not mandatory"in certain special cases (See Appendix II).

Obviously, the forensic experts are expected to treat this "not mandatory" clause only as "certain pieces of information are not mandatory in the certificate" and not as "the certificate itself is not mandatory".For example, the expert is expected to certify that *the information contained in the electronic record was derived or was reproduced from the information fed into the computer in the ordinary course of its activities* and such a certificate is expected to contain (a), (d), (e), (f), (g) and (h) above.

Forensic steps to ensure judicial admissibility of electronic records as secondary evidence

Needless to say, the onus of establishing the admissibility of electronic evidence produced in the court of law rests either with the cyber forensic expert of the investigation teamor on the one designated by the court.(For further explanation of the term "Cyber Forensic Expert", read the section "Qualifications of a cyber forensic expert" below.)

As part of the forensic tasks to achieve this admissibility, the expert is expected to follow certain standard cyber forensic protocols, processes and procedures. Unfortunately, no such standard cyber forensic protocols, processes and procedures have been prescribed

throughany legal document or precedent case studies in India. Because of the absence of such forensic protocols, processes and procedures, cyber forensic experts often set and follow their own standards to present the cyber evidence in the court. Although the legal system in India does not prevent or forestall the experts from doing so, it is always desirable (and sometimes, necessary) that the experts include certain important details in their forensic report (which is legally termed as "The Certificate") that supports and/or further authenticates eachpiece of digital evidence. A list of such important details to be included in the certificate that is produced by the cyber forensic expert in the court of law is given below.

1. **Details about the nature of the electronic evidence presented by the forensic expert.** Thesedetails include

   a. Nature of the original electronic document in which the evidence is submitted: As electronic document / As Paper document / As electronic as well as paper document

   b. File format of the original electronic document (For example, if the electronic evidence presented is a digital image in JPEG format, then enter here "Digital Image in JPEG format")

   c. Other superficial meta-details of the electronic document (as found in the "Properties" icon of the electronic document)

   d. A brief account (preferably with date-stamp and time-stamp) of the content of the document presentedand also the medium (for example, CD, DVD) in which the

electronic evidence is presented in electronic format, if any.

   e. A statement by the forensic expertwho accessed this file for the forensic purpose that the details 1.a. to 1.d. above are correct to the best of his / her knowledge and belief

2. **Details of the device (including a mobile phone or a computer or the combination of computers) that preserved and processed the basic data and that produced the basic information that, in turn, led on to or produced the evidence:** These details include

   a. The detailsof the geographical location of the device and of the organization where the device was found installed

   b. The hardware configuration of the device

   c. The operating system specification of the device

   d. The network configuration, if any, of the device

   e. A brief account of how the basic data was fed into, preserved, and processed and how the evidential information was produced by the device, all of which preferably supported by the IP addresses, date-stamps and time-stamps

   f. A statement by the cyber forensic expertwho has accessed the device (and another statement by the person responsible to administer the device) that the details 2.a. to 2.e. above are correct to the best of his / her knowledge and belief

At this stage, it may be noted that the details as part of 2.a., 2.b., 2.c., and 2.d.are not mandatory if the device is physically inaccessible to the cyber forensic expertand also to the investigation team[8].In such cases, the cyber forensic expert is expected to mention in the certificate that the device was physically inaccessible to him/her but was accessible online and the details given under 2.e. are correct to the best of his / her knowledge and belief (This is the place where the "not mandatory" clause, mentioned above, is significant).

3.   **Details of the device(s) (for example, a mobile phone or a computer or a combination of computers) used to extract the evidence (from the device mentioned in 2 above):** These mandatory details include

   a.   The details of the geographical location and the organization where the devicewas installed for the purpose of extracting evidence

   b.   The hardware configuration of the device

   c.   The operating system specification of the device

   d.   The network configuration, if any, of the device

   e.   A brief note onthe Computer Engineeringprotocols, processes and procedures followed by the expert to set upthe device for the purpose of extracting the evidence. Also, a brief note that gives proper reasons for setting up of and using such advice (of that particular configuration) for extracting evidence

   f.   A statement by the expertwho performed 3.a. to 3.e., mentioned above,that the details given vide 3.a. to 3.e. above are correct to the best of his / her knowledge and belief

4.   **Details of the forensic protocols, processes and procedures used to extract the evidence (mentioned in the item 1 above):**

   a.   A brief account of how the pieces of basic information were extracted (vide item 3 above) for the purpose of generating the evidence (including the basic forensic steps carried out by the expert using the device mentioned in item 3 above)

   b.   The configuration of the forensic hardware tools used in addition to (and may be in combination with) the device mentioned in item 3 above

   c.   The configuration of each of the software tools used to extract the evidenceby using the device mentioned in item 3 above and alsovide4.b. above

   d.   A proof of forensic authenticity of each of the forensic software tool (mentioned in 4.c. above) and the hardware tool (mentioned in 4.b. above) both of which were used to extract the evidence. [This proof can be in the form of a government order or an article appearing in a world-renowned peer-reviewed journal or any technical document that is convincing to the judiciary. In this regard, the Daubert

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8   *Shafi Mohammad vs. The State of Himachal Pradesh*, SLP(Crl.)No.2302 of 2017.

Conditions[9] which are followed by the US judiciarycan be of help.]

e. A statement by the expert who performed the forensic task that the details given vide 4.a. to 4.d., mentioned above, are correct to the best of his / her knowledge and belief

While the steps 1 to 4, given above, are expected to be followed in order to give a clear picture of the nature of the evidence, its source and also the way in which it was extracted, the following steps (that means, Steps 5 to 7) are expected to be followed only when the cyber forensic expert needs to additionally prove the originality (or authenticity or accuracy or legitimacy or genuineness) of the electronic record which is submitted as evidence in the court of law. Originality of a submitted electronic record can be generally proved by proving that the record (submitted in the court) is a copy of the originally created file and is not tampered or manipulated or interfered with.This means also that, the originally of a submitted electronic transaction can be generally proved by proving that the submitted transaction details are copies of the original electronic transaction details and are not tampered or manipulated or interfered with.

5. **Hex-details of the digital products which are produced by the expert in the court as proof of the degree of originality of the evidence:** These digital products include screenshots, images, audio clippings, and video clippingsand their hex-details are primarily intended to prove or disprove their originalityin the court of law.These details are in addition to the items 1 to 4 above and shouldinclude

a. The source details, specification and the configuration of the hex-editing software tool used by the expert to extract the hex-details of the digital product

b. Output (which, in Computer Science, is called a hex-dump) of the hex-editing tool after loading each of such digital products. [Each of these outputs can be produced as a text file in digital form. Such text files can be extremely large. For example, the text file of the hex-dump of a digital image can have 50-55 A4 size pages and that of a 1-minute video clipping can have 70,000 to 80,000 A4 size pages but only 1 or 2 of these pages can be relevant to the court case. See 5.c. below.]

c. Screenshot of the relevant portions of each output (mentioned in 5.b. above). [These relevant portions include the portions that mentions the configuration of the device (for example, the camera) used to capture the particular digital product including the date-stamp and time-stamp of capturing (and also the location of capturing, if provided there). If the digital product was found edited or manipulated, then the above relevant portions should include the details of the software tool used to edit the particular digital product including the date-stamp and time-stamp of editing (and also the location of capturing, if provided there)]

d. A statement by the expert who performed the forensic task that the details given vide 5.a. to 5.c.

9   Daubert v. Merrell Dow Pharmaceuticals, Inc., 509 U.S. 579 (1993)

above are correct to the best of his / her knowledge and belief

6. **Digital transaction logs presented by the expert in the court as proof of the degree of originality of the evidence:**Any automatically-created transaction log (if found automatically preserved in a way that isinaccessible to ordinary users) can be presented as evidence with the objective of proving or disproving the originality of a particular digitaltransaction (or a set of digital transactions) in question. While producing any transaction log, the expert is expected to include (in addition to the items 1 to 4 above)

    a. The source details of these transaction log (for example, the configuration of the hardware including the storage devices, thepath and other details of the digital location where the particular transaction log was found, the format of the log file etc.)

    b. The specification and the configuration of the software tool used to extract the transaction logs.[For example, Apex software tool used to extract the transaction log of an SQL Server Database]

    c. The output of the software tool after loading the transaction log. [This can be produced either as a text file or in any digital but human-readable form that is convincing to the judiciary]

    d. Screenshot of the relevant portions of the transaction log (mentioned in 6.b. above) to prove or disprove the originalityof the transaction (or a set of transactions) in question.

[These relevant portions include the portions that explain and detail the transaction including the portions where date-stamp and time-stamp of the transactiondo appear.]

    e. A statement by the expert who performed the forensic task that the details given vide 6.a.-6.d. above are correct to the best of his / her knowledge and belief

7. **Source code presented by the expert in the court as proof of the degree of originality of the evidence:**If found necessary, any source code (including the source of an email or of a webpage) can be presented by the cyber forensic expert in the court of law with the objective of proving or disprovingthe originalityof the particular electronic evidence in question. While producing a source code, the expert is expected to include

    a. The details of thehardware source of the source code(for example, the configuration of the hardware, including the location details, where the source code was found and then extracted from)

    b. The specification and the configuration of the software tool used to extract the source code

    c. The output of the software tool after loading the source code. [This can be produced either as a text file or in any digital but human-readable form that is convincing to the judiciary.]

    d. Screenshots of the relevant portions of the output (mentioned in 7.c. above) to prove or disprove

the originality of the electronic evidence in question. [These relevant portions include the portions that explain and substantiate the electronic evidence including the date-stamp and time-stamp of the creation / manipulation of the electronic evidence.]

e.   A statement by the expert who performed the forensic task that the details given vide 7.a. to 7.d. above are correct to the best of his / her knowledge and belief

Before concluding, here is a word of caution. Theguidelines given above donot intend to suggest or to advisethat the cyber forensic expert should not present any electronic record which is not mentioned above. Again, the guidelines do not mean that the expert cannot present an electronic record in a manner which is not mentioned above. They onlymean that the expert's workmayturn out (or bear fruit) better if they generally follow the guidelines which are mentioned above in order to meet the provisions put forward by the Indian Evidence Act and alsoby the Information Technology Act. Also, before presenting evidence in the court of law, it is desirable that expert take legal opinion on the legal validity and completeness of the content of his / her forensic report.

Qualifications of a cyber forensic expert

Can anycomputer expert orcyber forensic expert produce any electronic records as evidence and then "certify" them? Legally, not all of them can. The legality of this also has relevance in this article.

It is known in the legal circles that no court would expect a "certificate" from an expertwho is entrusted by the court to carry out a particular forensic task(irrespective of his / her official status in a government or a private agency). From a court-appointed-expert, the court would expect only a detailed forensic report.On the other hand, the court would expect a "certificate" from an expert who is appointed by other agencies like the police, CBI etc. In such cases, in many courts of law across India, the words "certify" and "certificate" (related to Sec. 65B of the Indian Evidence Act) were repeatedly questioned by the lawyers (especially, of the opposite party) by citing the absence of a government list of "certifying authorities". Such a questioning is legally valid because such verification and authentication get validity only when authenticated by an official approved by a certifying authority. But the Government of India has not so far designated anybody as a certification authority either to "certify" digital evidence or to issue a "certificate" (both under 65(B) of the Indian Evidence Act). Because of all these, even a "certificate" issued by a government forensic expert can be challenged in the court of law.

One important point that needs special attention here is that it is mandatory that *the statement should be signed by a person occupying a responsible official position in relation to the operation or management of the relevant activities* and that *the statement is made to the best of knowledge and belief of the person making it*(Singh, 2016). As a result, not all investigation officers can certify electronic records as evidence as they may not be the persons who actually extracted the electronic evidence (which is a point often raised by the defense lawyers while challenging the genuineness of the electronic evidence submitted by the prosecution). It also means that, any electronic record extracted by any other person (and certified and presented in the court by the investigation officer) has no legal standing. Only the person who actually extracted the electronic records (from its digital source) can certify

certain minutest aspects of the four conditions under sec. 65B(2).

Another point related to the "certificate" is thus: During the litigationprocess of a case in which an electronic record is presented as evidence, one important point that can come up is the legal provision under which the person was authorized as a cyber forensic expert (entitled to extract those electronic records which, subsequently, were presented by the investigation officer as evidence in that case).In cases where electronics records arepresented as evidence by the prosecution, defense lawyers, by following the present definitions, often raise the point that onlyeither*the person having lawful control over the use of the computer*[10] from the which the electronic records were extracted or the person appointed by the court can become the cyber forensic expert in that particular case and hence, any electronic record extracted by the cyber forensic expert in the investigation team (and certified and presented in the court by the investigation officer) has no legal standing. For instance, in cases where a print-out (or a digital copy) of aYAHOO email is presented by the prosecution as evidence of crime, thedefense lawyer can raise the point that the copy is not legally valid unless it was extracted by the expert appointed by the court or is certified by the Email Server Administrator of YAHOO. [Since the Yahoo Email server is physically located outside the jurisdiction of the Indian judiciary, such a certification process demands invoking the related provisions of MLAT (Mutual Legal Assistance Treaty)or UNTOC (United Nations Convention against Transnational Organized Crime) or any related treaty, obviously, upon a court order.] In short, the defense lawyer may argue that such email evidence, if "certified" only by a "local" cyber forensic expert,is legally invalid.

In general, such unfortunate situations are often due to the incompleteness of the legal definition of the qualification of a cyber forensic expert and so,can negatively affect the legality of the electronic evidence presented in the court. Thus, things can even lead to the unfortunate situation of culprits going scot free.In order to avoid such unfortunate situations in the court of law, the cyber forensic experts and also the investigation officers are expected to follow 65B as much as possible by following the guidelines given above and thus, to convince the originality (or authenticity or accuracy or legitimacy or genuineness) of the electronic record which is submitted as evidence.

There is also the issue of the qualification(formal or otherwise) of the expert. The Indian legal system does not prescribe that the cyber forensic expert (who submits electronic records in the court of law) shall be qualified in that particular field.As mentioned above, it prescribes only that the forensic statement (or the certificate) should be signed *by a person occupying a responsible official position in relation to the operation or management of the relevant activities*.Currently, the lower courts accept qualifications based on the skills and previous work experience of the experts. While this has been sufficient to date, it is anticipated that contesting the expertise and qualifications of expert witnesses will become more common in the future.

The US courts insist that the expert needs to be a human being (Meyers and Rogers, 2004) and that an inanimate object (e.g. a forensic software package or other digital products like a digital image or a video clipping) cannot be considered an expert. Such an interesting decisiondoes not, however, mean that the object or results from that object cannot be used in

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10   See 65B(2)(b) of the Indian Evidence Act

any circumstances for scientific testimony in the US courts. It only meant that, in such circumstances and as said above, the individual using the forensic software package for extracting evidence (or presenting a digital product as evidence) will have to first clearly mention, then substantiate and finally attest to it.

Oral witness

A cyber forensic report (prepared in the form mentioned above) need not always be followed by "oral witness". According to Sec 22A of the Indian Evidence Act, *oral admissions as to the contents of electronic records are not relevant unless the genuineness of the electronic record produced is in question*. The content of this section means also that the additional judicial step of bringing in an"oral witness" can be mostly avoided or minimized by preparing the cyber forensic report as complete, conclusive, informative, clear, and self-explanatory as possible as mentioned above.

Expert Opinion

Any legal or judiciary system with a sense of responsibility and accountability would like to ensure that it be properly informed by experts in matters that are outside their area of expertise (United States Court of Appeals, 2001). Needless to say, the Indian judiciary too thinks that electronic evidence is a result of cyber forensics which is outside the area of expertise of the judiciary. According to Sec 45A of the Indian Evidence Act, *when in a proceeding, the court has to form an opinion on any matter relating to any information transmitted or stored in any computer resource or any other electronic or digital form, the opinion of the examiner of electronic evidence referred to in Section 79A of the Information Technology Act, 2000 is a relevant fact.*

Conclusion

Finally, because the judicial system has difficulties in mandating and interpreting standardization for computer forensics, it becomes the responsibility of the scientific community to assist in this endeavor. It is therefore the responsibility of the cyber forensic experts of the investigation agencies to assist the investigators, lawyers and jurors to detect, document, analyze, preserve and also present electronic evidence in the legally admissible way by strictly following the sec. 65Bto establish culpability.

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Appendix I

The conditions which have to be satisfied so as to make a computer output as primary evidence are stated in sub section (2) of the Indian Evidence Act 65(B). They are as follows:

1. It is necessary that the computer output containing the information was produced by the computer which was used regularly to store or process the information for the purposes of any activities being regularly carried on by the person having lawful control over the use of the computer.

2. The information is of the kind which was regularly fed into the computer in the ordinary course of its activities.

3. The computer should have been operating properly during the period of the data feeding. If it was not operating properly during that period or was out of operation, it is necessary that the gap was not such as to affect the electronic record or the accuracy of its contents;

4. The information contained in the electronic record was derived or was reproduced from the information fed into the computer in the ordinary course of its activities.

Observations made on the Certificate by the Hon. Supreme court in the *Shafi Mohammad vs. The State of Himachal Pradesh*[11]:

    i.   *Electronic evidence is admissible under the Act. Section 65A and 65B are clarificatory and procedural in nature and cannot be held to be a complete code on the subject.*

    ii.   *If the electronic evidence so produced is authentic and relevant, then it can certainly be admitted subject to the court being satisfied of its authenticity. The procedure for its admissibility may depend on the facts such as whether the person producing the said evidence is in a position to furnish a certificate under Section 65B (h).*

    iii.   *The applicability of the procedural requirement under Section 65B(4) of the Act of furnishing a certificate is to be applied only when such electronic evidence is produced by a person who is in a position to produce such a certificate being in control of the said device and not of the opposite party.*

    iv.   *In a case where electronic evidence is produced by a party who is not in possession of a device, applicability of Sections 63 and 65 of the Act cannot be held to be excluded. In such cases, procedure under the said provisions cannot be held to be excluded.*

    v.   *A person who is in possession of authentic evidence but on account of manner of proving, such document is kept out of consideration by the court in absence of certificate under Section 65B(4) of the Evidence Act, which party producing cannot possibly secure, will lead to denial of justice.*

    vi.   *A party who is not in possession of a device from which the document is produced cannot be required to produce a certificate under Section 65B (4) of the Act. Thus, the requirement of certificate under Section 65B is not always mandatory.*

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11   *Shafi Mohammad vs. The State of Himachal Pradesh,* SLP(Crl.) No.2302 of 2017

Do Police in India Control Crimes?

Shashank Deora[1]

Sanjiv J Phansalkar[2]

Abstract

While thinking of crimes and their relationship with the police presence, ceteris paribus the police presence must reduce the crime rate. While several empirical studies, mostly outside India, support this hypothesis, there are other studies which do not find a clear relationship between the two. There is also evidence of a positive relationship between the police and crime and that an increase in crime rate leads to an increase in the police presence. This study is an attempt to explore this relationship between the police strength and crime rate in India. It uses state data on seven crime categories and compares it with the state data on police presence per lakh population and square kilometre for 2016 to determine this relationship. It also does a comparison across years. Results from the study indicate that the total cognizable IPC and SLL crimes reduce with an increase in the police strength per lakh of population. However, no such relationship exists with the police strength per square Km. For none of the seven crime categories under analysis, crime rates are in a clear inverse relationship with the strength of the police. Relationship of crime rates with NSDP per capita and unemployment is also at variance with the earlier research findings. Study results warrant the need for further research on this subject in the Indian context. It also flags the need for further research on criminal motivations which defy police presence.

Introduction

India has a population of 1.21 billion as per the census of 2011. Against this population, it had police (civil and district armed police) strength of 1545771 as on January 1, 2017. During 2016, the total incidents of crime in India - cognizable IPC and SLL crimes – were 4831515. While thinking of crimes and their relationship with the police presence, ceteris paribus the police presence must reduce the crime rate. The economic theory suggests the same (Becker, 1968).

This study is an attempt to explore this relationship between the police strength and crime rate in India. Introduction section does a review of the existing theories and studies having

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explored the relationship between police strength and crime incidence through different perspectives. Through this review, it also attempts to determine the motivations to a criminal for committing a crime. Second section comes up with a set of hypotheses based on the literature. Third section explains the results from a set of correlations to validate the proposed hypotheses. Discussion follows the results.

Becker (1968) came up with this theory that a criminal commits a particular crime only if its opportunity cost is lowest among all the available alternatives. As per his model, an increase in the police presence lowers down the expected gains and increases the expected losses for criminals. Hence, an increase in police presence leads to a reduction in crimes. This conclusion finds support in empirical studies.

One study in the United States, comparing crime rates with police officer staffing throughout 12 years, finds out a negative correlation between the two (Guffey, Larson, & Kelso, 2010). Several studies analysic this relationship across different categories of crime. Few have found an increased police presence to be followed by significant reduction in violent as well as property-related crimes (Levitt S. D., 2002; Lin, 2009). One study in London finds an immediate reduction in violence and sexual offences, theft and handling and robbery, post an increase in the police presence (Draca, Machin, & Witt, 2011). Vollaard & Koning (2009) use a victimisation survey across Netherlands to find out that an increased police presence negatively affects public order related crimes along with violent and property related crimes. A world bank study looking at crime-related losses to the private firms across 27 developing countries finds that an increase in the strength of police by 1 per cent leads to a reduction in crime losses by 0.43 per cent (Islam, 2016).

However, evidence from several studies is not exactly in line with this rational approach. One

study, from US, finds that while an increased police strength is associated with reduced robberies and burglaries, it does not affect murder and motor-vehicle theft (Corman & Mocan, 2000). Sherman et. al. (1997) find evidences across studies, in their review study, of an increase in the crime rates post police strikes. Levitt (1998) finds that the official reporting of crimes increases with an increase in the number of police personnel per capita, due to reporting of hitherto unreported crimes. A 2016 report sponsored by BPRD identifies the political economy of crime statistics, impact of crime statistics on performance appraisals of the police functionaries, as one of the reasons for non-reporting of crimes in India (Rao, 2016).

Then there are studies which attribute a simultaneous measurement of crimes and police presence for a positive relationship between the crimes and police presence. Swimmer (1974) found that while an increase in the police presence causes a reduction in crimes on the one hand, an increase in crimes leads to an increase in the police presence for violent and property related crimes on the other. Increase in the police strength has been found to help in deterring crimes significantly while a rise in the crime rate leads to a nominal increase in the police strength (Marvell & Moody, 1996).

Fewer studies suggest other methods of preventions than solely increasing the number of police personnel. One study from United States determines that the way of working of police is more important than the number alone and that an increase in the number of police personnel does not make a difference (Rouse, 1985). Sherman, et. al. (1997) suggest having different policing arrangements and actions in different situations, for different crimes and at different times. Back in India, one study suggests that the criminal behaviour theory applicable in the developed countries may have limited application in the context of India and increasing

the police strength is not the solution to controlling crimes (Dutta & Husain, 2009).

Few other studies identify other motivation for committing a crime. Fajnzylber et. al. (2002) analysed international homicide and robbery rates across a sample of developed and developing countries to find out that a lower GDP growth rate and a higher income inequality are associated with a higher crime rate. A study from Pakistan identifies that the economic factors including poverty and unemployment cause an increase in the crime rate (Gillan, Rehman, & Gill, 2009). One study in India, looking at the crime data from 2011 to 2012 in India, concludes that urban population as a per cent of the total population, GDP per capita PPP and unemployment rate determine significant variation in the overall crime rate (Mavi, 2014). Another study, based on crime data from 1991 to 2015, finds out that unemployment and inflation rate are directly related, and GDP per capita is inversely related to the total number of crimes (Hazra & Cui, 2018).

Another argument is of a significant role of people discouraging against a crime to check crime rates (Felson, 1995). However, none of the alternatives offered absolves police of their role as guardians against crimes. Moreover, there is evidence of an inverse relationship between proactive police action and crimes irrespective of the known crime determinants like unemployment (Sampson & Cohen, 1988).

Relationship of crime rate and the police strength shows mixed relationship in literature, however, most of these results are not in the Indian context. Understanding relationship between the police strength and crimes is crucial to pressing the right triggers that can contribute to reducing crime incidence.

Methodology

This study attempts to understand this relationship in the India context. It looks at the state-wise data available for crime incidence and police presence of 2016 and compares it with similar data from 2011 and 2015. It uses data from the National Crime Records Bureau (NCRB) and the Bureau of Police Research and Development (BPRD) – crime incidence during the whole calendar year and police presence at the start of the next year. Study forms few hypotheses based on the existing theories and findings of the previous studies. It checks the validity of these hypotheses using available data.

For analysis, the study considers seven major heads under IPC and SLL crimes. Literature lends support to an inverse relationship between the police strength and crime rates for few crimes across four crime categories namely, crimes against human body, other crimes against women and children, crimes related to property, documents and property marks and crimes against public tranquillity. For rest three categories also – crimes against the state, crimes against SCs and STs and drug and arms-related crimes – this study posits a negative relationship between the police strength and crime rates, in line with Becker's economic approach. Study puts forward two more hypotheses to determine if GDP per capita (NSDP for states) and unemployment are motivation for crimes as found in a few studies.

Proposed hypotheses are:

1. Crime rates for all cognizable IPC and SLL crimes reduce as the strength of police increases

2. An increase in the crime rate causes an increase in the strength of police

3. Crime rate reduces with an increase in the NSDP (Net state domestic product) per capita income

4. Crimes rate reduces with a reduction in the unemployment rate

Analysis relates crime rates with two parameters – total strength of state police (civil) per lakh of population and total strength of state police (civil) per square kilometre. It performs a correlation of crime rates with these two parameters.

Study analyses data across different crimes categories for 2016. Data includes different crime categories from both cognizable IPC (Indian Panel Code) and SLL (Special and Local Laws). Study also does a comparative analysis of the overall crime rates, both IPC and SLL, across 2015 and 2016. Additionally, this study attempts to establish a relationship between the changes in police strength and the overall crime rates over a five-year period from 2011 to 2016.

Results

Variation of crime rates with the strength of police

Overall crime rates

Analysis for years 2015 and 2016 shows that crime rates for different crime categories have different relationships with the police presence. Rate of the total cognizable IPC crimes shows a weak, almost negligible, negative correlation with the strength of state police per lakh of population (r = -0.18). However, it shows a medium positive correlation with the police presence per square kilometre, r = 0.53 and r = 0.48 for 2015 and 2016 respectively.

Another category of crimes, the rate of total cognizable SLL crimes shows a weak negative correlation with the strength of state police per lakh population at r = -0.24 and r = -0.16 for 2015 and 2016 respectively. However, unlike IPC crime rate, it shows a weak, almost negligible, negative correlation with the police strength per square kilometre (r = -0.11 and r =-0.07 for 2015 and 2016 respectively).

Total cognizable crimes under both IPC and SLL crimes indicate a slight reduction with an increase in the police strength per lakh of population in both 2015 and 2016. A positive correlation between the total cognizable IPC crimes and the police strength per sq. Km can be interpreted as an increase in the deployment of police personals in places where the crime rate is high. However, police strength per square Km shows almost no dependence on the total cognizable SLL crimes.

Crimes rates of different categories

Category-wise crime analysis below shows only the direction of the correlation – positive or negative correlation. Strengths of correlation coefficients have been omitted for the sake of convenience. A matrix form representation of different crime categories is facilitating communication of their relationship with the two parameters of the police strength simultaneously.

1.   Crimes on human body

Study analyses a total of twenty-two types of crimes on human body (table 1). Of these, six crimes reduce with an increase in the police strength per Sq. Km and the police strength per lakh population. Five crimes are at the other extreme, showing an increase in the states where the strength of police per sq. Km as well as the strength of police per lakh population is high. Rest eleven crimes exhibit a jumbled relationship with the strength of police, reducing with only one of the two measures of the strength of police.

2.   Other crimes against women and children

There is a total of nine crimes under this category analysed under this study (table 2). Of these nine crimes, five crimes exhibit a reduced crime rate with an increase in the strength of police per Sq. Km as well as the strength of police per lakh of population. However, of the remaining four crimes, two reduce as the police strength per lakh population increases and when

Table 1: Relationship of crimes against human body with the change in the police strength

Strength of police Per Sq. Km / Strength of police per lakh population	Increasing crimes	Reducing crimes
Increasing crimes	Culpable homicide not amounting to murder, assault on women with intent to outrage her modesty, voyeurism, kidnapping and abduction (Sec 363 IPC), rape	Kidnapping and abduction in order to murder, kidnapping and abduction for ransom
Reducing crimes	attempt to commit culpable homicide, acid attack and attempt to acid attack, causing simple/grievous injuries by reckless driving/act, sexual harassment, assault or use of criminal force with intent to disrobe, stalking, kidnapping and abduction for other reasons (Sec 363A, 365, 366A, 366B, 367, 368, 369 IPC), human trafficking, dowry deaths	Murder, causing death by negligence, attempt to commit murder, grievous hurt, kidnapping and abduction of women to compel her for marriage etc, attempt to commit rape

Table 2: Relationship of other crimes against women and children with the change in the police strength

Strength of police Per Sq. Km / Strength of police per lakh population	Increasing crimes	Reducing crimes
Increasing crimes	Insult to the modesty of women	Prohibition of child marriage
Reducing crimes	Juvenile justice (care and protection) act, cruelty by husband or his relatives	Dowry prohibition act, Immoral traffic act, protection of women from domestic violence act, indecent representation of women (prohibition) act, prenatal diagnostic techniques (reg and prevention of misuse)

the police strength per sq. Km increases. One crime, *prohibition of child marriage* reduces with the police strength per lakh of population, however it increases with an increase in the police strength per sq. Km. Whereas, *insult to the modesty of women* tends to be higher when the strength of police increases.

3.   Crimes against scheduled castes and scheduled tribes

These crimes fall under different cells of the two-by-two matrix (table 3) and, therefore, there is no apparent reduction in the crime rates with an increase in the strength of police.

Table 3: Relationship of crimes against scheduled castes and scheduled tribes with the change in the police strength

Strength of police Per Sq. Km Strength of police per lakh population	Increasing crimes	Reducing crimes
Increasing crimes	Prevention of atrocities act for crimes/atrocities against STs	Protection of civil rights act
Reducing crimes	-	Prevention of atrocities act for crimes/atrocities against SCs

4.   Crimes against state

Crimes against state (table 4) reduce as the police strength per sq. Km increases. However, these crimes do not reduce as the police strength per lakh of population increases. These crime rates are higher in states with a higher police strength per lakh population.

Table 4: Relationship of crimes against the state with the change in the police strength

Strength of police Per Sq. Km Strength of police per lakh population	Increasing crimes	Reducing crimes
Increasing crimes	-	IPC offences against state, Prevention of damage to public property act, unlawful activities act
Reducing crimes	-	-

5.   Crimes against public tranquillity

Of the three types of crimes against public tranquillity (table 5), two reduce as the police strength per sq. Km and the police strength per lakh population increases. However, one crime, *offences promoting enmity between different groups*, increases as the police strength per Sq. Km and the police strength per lakh population increases.

Table 5: Relationship of crimes against public tranquillity with the change in the police strength

Strength of police Per Sq. Km Strength of police per lakh population	Increasing crimes	Reducing crimes
Increasing crimes	Offences promoting enmity between different groups	-
Reducing crimes	-	Unlawful assembly, rioting

6.   Crimes against property, documents and property marks

Out of eleven crime types against property, documents and property marks (table 6) five crimes have a higher crime rate and two crimes have a lower crime rate in states with higher police presence both per sq. Km and per lakh population, whereas rest of the crimes show a mixed relationship with the two parameters of police strength.

Table 6: Relationship of crimes against property, documents and property marks with the change in the police strength

Strength of police Per Sq. Km Strength of police per lakh population	Increasing crimes	Reducing crimes
Increasing crimes	Theft, auto theft, criminal trespass and burglary, robbery, counterfeiting	Extortion, arson
Reducing crimes	Criminal breach of trust, cheating	Dacoity, forgery

7.   Drugs and arms-related crimes

This study analyses five drugs and arms-related crimes (table 7). Of these, crimes rates of three crimes reduce with an increase in the strength of police per Sq. Km and per lakh population. However, two crimes increase with an increase in the strength of police.

Dependence of police presence on the crime rates

One possible source of a blur relationship between the crime rates and the police presence has been found to be the simultaneous measurement of change in the police presence and the crime rate. To validate this and to find

Table 7: Relationship of drugs and arms-related crimes with the change in the police strength

Strength of police Per Sq. Km Strength of police per lakh population	Increasing crimes	Reducing crimes
Increasing crimes	Excise Act, NDPS act	-
Reducing crimes	-	Arms act, explosives act and the explosive substances act, prohibition act

out the impact of change in the crime rates on the change in the police strength, study performs a regression between the two.

It takes the change in the total cognizable IPC and SLL crime rates from 2011 to 2016 as independent variables and change in the police strength during the same period as a dependent variable. Period of five years has been considered to measure the change to account for the lag in the police recruitment following an increase in the crime rate.

Results from the regression analysis explains that there is weak relationship between the two sets of variables (Multiple R = 0.21). Percentage of variation in the dependent variable explained by the independent variables is also meagre (Adjusted R Square = -0.01). Thus, results show that the crime rate is not an essential determinant to the change in the police strength over time.

Crime rates and unemployment

Correlation of total cognizable IPC crimes with unemployment rates (UPS approach based) for 2016 yields very weak, almost negligible, negative correlation (r= -0.15) (Labour Bureau, 2016). On the other hand, correlation of total cognizable SLL crimes with unemployment rates yields an equally weak, but positive correlation

(r = 0.11). Thus, neither the crime rate of total cognizable SLL crimes nor the total cognizable IPC crime rate shows any dependence on the unemployment rate.

Crime rates and NSDP per capita income

Available NSDP per capita data is over a financial year (April to March), whereas crime data available is for a calendar year (January to December). Therefore, to avoid errors of measurement, study uses NSDP per capita data for two financial years 2015-16 and 2014-15 (Economic and Statistical Organization, 2018). It performs correlation of such available state-wise data with crime rates of the total cognizable IPC and SLL crimes during 2016.

Total cognizable IPC crimes show a medium positive correlation at r = 0.34 with NSDP per capita 2015-16 and r = 0.35 with NSDP per capita 2014-15. Moreover, the total cognizable SLL crimes show a negligible positive correlation at r = 0.11 with NSDP per capita 2015-16 and r = 0.12 with NSDP per capita 2014-15.

Thus, while total cognizable IPC crimes show a slight increase with an increase in the NSDP per capita; SLL crimes have no relationship with the NSDP per capita.

Discussion

Results obtained above do not provide explicit support to proposed hypotheses. The total cognizable IPC and SLL crimes show a weak to negligible reduction with an increase in the police strength per lakh of population. This result is similar to the result found by Guffey, Larson, & Kelso (2010). However, no such relationship exists with the police strength per square Km.

Interpretation of crime rates of different crime categories also yields similar relationship. Strength of the direct as well as the inverse relationship also varies from weak to strong across crime categories. However, for none of the seven crime categories under analysis, crime rates are in a clear inverse relationship with the strength of the police per square Km and the strength of the police per lakh of population. This result is only partially similar to the results obtained by earlier studies (Levitt S. D., 2002; Draca, Machin, & Witt, 2011; Vollaard & Koning, 2009; Lin, 2009). Literature from other countries also discusses a lack of clarity on this subject (Sherman L. , 1992). Previous studies have also found lack of a clear relationship due to reasons such as a underreporting of crimes, policing strategy rather than numbers determining the crime rates and simultaneous measurements of crime rates and police strength (Corman & Mocan, 2000; Levitt S. D., 1998; Rao, 2016; Sherman, et al., 1997; Marvell & Moody, 1996). However, results also show that crime rate is not an essential determinant of the police presence over a period, at variance with the results obtained in the previous studies by Marvell & Moody (1996) and Swimmer (1974).

Analysis of relationship of crime rates with external factors is also at variance from the results obtained by Mavi (2014) and Hazra & Cui (2018). Crime rates for neither of the two crime categories show any dependence on the unemployment rate. NSDP per capita also does not exhibit any association with the total cognizable SLL crimes; instead, it is showing a positive correlation with the total cognizable IPC crimes. Delhi has among the lower unemployment rates and higher per capita income; however, Delhi has the highest crime rate of the total cognizable IPC crimes in 2016.

One possible explanation for variation in the relationship of crimes with NSDP per capita and unemployment rate is the migration across states. People from economically impoverished states migrate to work in economically prosperous states; they are not accounted for in the NSDP data of the host state, however this population is part of the crime data for the state.

These results give a blurred picture of the relationship between police strength and crime. They show a variance from the results obtained in earlier studies. They also flag the need for further research for an in-depth understanding of this relationship in India. Another aspect which merits further research is the motivation for committing a crime which defy the presence of police, again in the Indian context.

This study has a few limitations. First of these is its reliance on only correlation as a measure of relationship between crime rate and other parameters. Also, the study relies entirely on the government data, which may have few errors of reporting. Another limitation of this study is the comparison of crimes with other police presence over the same period – causal effect of police presence on crime rates can manifest with some time lag. Reliance of this study on a short-term data – one to two years – for analysis is another limitation of the study; considering an extensive time series data may yield a different result. However, literature also has evidence of a reduced crime rate immediately after increasing police presence (Draca, Machin, & Witt, 2011).

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Cyber Threat: Indian Railways Perspective

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Abstract

The article discusses about the challenges faced by the Indian Railways being the largest railway network of the world and strategies to counter the contemporary problems afflicting railways like attack vectors, signaling related and technology related problems and communication related problems. It also discusses the modus operandi prevalent in digital era and the vulnerabilities faced by the system and its panaceas.

Keywords

ERTMS, Anti-Collision Device, Train Collision Avoidance System, ICT, SCADA, Control Office Application

Introduction

Indian Railways is the largest railway network under a single management in the world. Spread across nearly 66,030 route Kms. During 2014-15, on average, 20,849 (provisional) trains including 12,995 (provisional) passenger carrying trains were run daily, nearly 23 million passengers were booked daily and 1101.08 (provisional) million tons of freight traffic was loaded during the year. With the massive utilization of assets, safety and security is of paramount importance. Railway Protection Force (RPF) is entrusted the job of protecting and safeguarding railway passengers, passenger area and railway property in coordination with Government Railway Police/local police and the Railway administration.

Indian Railways is using ICT (information and Communication Technology) to bring improvement in system safety and service reliability, maximizing track utilization, improvement in operational efficiency and passenger comfort. While the beneûts of digitizing railways are obvious, the potential implications of this evolution could be multi-faceted and profound, especially when it comes to the issue of security.

The British rail network came under attack from hackers 4 times in 2015. Although the attacks are said to have been purely exploratory in nature, the consequences could have been dramatic both for the company and for the passengers. The CSX virus attack in 2003 caused a morning shutdown of CSX's signalling and dispatch systems in 23 states east of the Mississippi, also halting Amtrak trains in that area. The Polish tram hack in 2007 caused injury to 12 people, and derailment and damage to four vehicles.

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The railways continue to be vulnerable to terror attacks. Going by an analysis conducted by the Intelligence Bureau on the threat perception, the railways are high on this list. There have been over 11 train accidents in 2016. While the cause of the accident has been ascertained in most cases, the one at Kanpur in November 2016 in which 143 lost their lives continues to be a mystery. In 2016, there was a mystery bomber who sought to send out a message to the security establishment. The Panipat - Ambala passenger train was attacked twice in 2016.

Attack Vectors in Railways

The increasing evolution of railway systems and it adaptation in Indian Railways such as the new European signaling standard ERTMS system (European Rail Traffic Management System), European Train Control System (ETCS), GSM-R, Mobile Trunk Communication Systems (MTCS) and Computer application based train operations leads up to new generation of threats and increased attack surfaces.

The Indian Railway cyberspace is a complex system of sub-systems. The attack vectors railways present for cyber-attack comes from its use of ICT technologies to automate and enable the railway and its businesses. This attack vector is provided by its need to facilitate local or remote access across networks, the use of standard communication protocols, the use of software and code that have known and unknown vulnerabilities and the use of system tools that allow wrongful use to harm the computing system and the railway processes they support.

Understanding the complexity of systems landscape provides the basis for developing a complete view of the attack surface available to attackers. Broadly, the railway cyber space can be divided into:

- Those that support the operation of the railway (operational technologies);
  - Signalling and train control system
  - Traction power distribution and SCADA (Supervisory Control and Data Acquisition);
- Those that manage information that supports the operation of the railway and the businesses that make up the rail industry (information technologies);
  - Traffic management, asset management(loco and wagon) and planning;
  - Access control using CCTV
  - Customer information;
  - Payroll, procurement, email and financial systems.
- The systems that provide local and wide area communication (telecommunication).
  - Optical Fibre cable
  - GSM-R
  - WIFI
  - Fixed telephony
  - IPv4/6

Signalling

Indian Railways is modernising signalling and telecommunication system to reduce probability of accidents through reduction in the scope of human error and to achieve efficiency and safety in train operations through centralised traffic control.

The train control systems in vogue in Indian railways include Anti-Collision Device (ACD),

Train Collision Avoidance System (TCAS), Train Protection Warning System (TPWS), Auxiliary Warning System (AWS), Communications-Based Train Control (CBTC) and Continuous Automatic Train Control (CATC).

For older railway systems, where train protection is based on track circuits and mechanical relay signalling, the security concerns reside primarily in the physical domain. In comparison, the ICT components used in newer signaling and traction power distribution expose additional cyber-attack surfaces, which could allow sophisticated attackers to combine cyber-attack vectors with physical attack means to achieve malicious goals.

Traction Power Distribution

The Supervisory Control & Data Acquisition System in Indian Railway is used for remote monitoring and control of 25 KVA overhead distribution systems for catenary power supply of electrified traction section of Indian Railway.

SCADA Strange Love, a group of cyber security researchers, has demonstrated the flaws in a certain number of the components in SCADA system. Their operation shows how intruders can use a single flaw to access all components on a train. Research into the IT security of industrial control/supervisory control and data acquisition systems (ICS/Scada) shows that the methods and approaches commonly used to breach information and computer security can be successfully employed to disrupt functional safety, reliability and industrial process safety.

Computerized Applications over Indian Railways

The computerized Passenger Reservation System (PRS) facilitates booking and cancelling of tickets from any of the 4000 terminals (i.e PRS booking windows) all over the country. The PRS Application CONCERT (Country-wide Network of Computerized Enhanced Reservation and Ticketing) is the world's largest online reservation application, developed and maintained by CRIS, the IT arm of Indian Railways.

Apart from the above there is an online portal IRCTC. IRCTC is the e-ticketing and hospitality portal operated by the state-run Indian Railways Corp. Issuing more than 500,000 tickets and other transactions per day, it is India's largest e-commerce portal. According to information on its website, IRCTC has a user-base of 39 million, and sells 500,000 tickets every month, with 50 million daily visitors. More than 58% of the train accommodation is reserved through e-ticketing

UTS on mobile app is an Indian Railways official android mobile ticketing app to book unreserved train tickets

Control Office Application (COA) - Train operations on the Indian Railways are controlled and monitored by the Control Rooms using Control Office Application which facilitates monitoring of train movements in real time and provides movement of scheduled and unscheduled trains planned and controlled through the computer aided interface.

Train Management System (TMS) - for integrated management and monitoring of suburban train movements and signalling, as well as planning train routes, diversions and introduction or withdrawal of rakes in service.

IPAS (Integrated Payroll Accounting System) - Part of AIMS (Accounting Information Management System) is a system for automate payroll processing and financial work.

Integrated Security System(ISS) comprises close circuit television (CCTV) camera, access control, personal and baggage screening system, bomb detection and disposal system which together provide multiple checking of passengers

and its baggage from the point of entry in the station premises till the boarding of the train.

Mobile Transit Information Apps traditionally in railways, the operators at the train stations broadcast train traffic update information to commuters via the Public information display (PID) and Public announcement (PA) systems. Recently, Indian railways have started to extend such information updates to mobile apps installed on commuters' mobile devices. Some of the Mobile apps in Indian railways are TADAAST (Train Arrival Departure And Amenities at Stations), HYLITES (Hyderabad Live Train Enquiry System, NTES (National Train Enquiry System, COMS (Complaint Management System) and Railways Parcel Application.

However, such extended channels could be misused. The emerging adoption of Mobile apps has complicated the landscape of passenger trafûc updates with additional channels and terminals that are much harder to properly secure.

Communication Infrastructure

Cyber-attacks can be either local or remote. The ability to carry out a local attack often depends on the type of the interface through which an attack is carried out. For example, where an attacker is able to apply power to a signal light or switch motor by accessing the cable connecting the OC with wayside devices. However, a remote attack can be carried out where wayside devices are radio controlled.

An attack on communication channels connecting wayside devices is much easier if data can be manipulated or carried out by a man-in-the-middle. Train operations can be disrupted by displaying incorrect train positions on the station master's workstation if the network protocol between the station master's workstation and CP/CPU can be manipulated. Communication channels and network protocols

can be attacked if communication channel bandwidth is reduced, or by introducing false routes. Most of these attacks can be carried out using general-purpose malware designed to infect Windows OS, or by getting an operator to connect an infected USB drive to the workstation or perform actions that will put the system out of operation.

Vulnerabilities do Exists

The Comptroller and Auditor-General of India has conducted Information Technology Audit of material management, computerised passenger reservation system, computerised applications over Indian railways, unreserved ticketing system and other computerised application in India railways, IT security on crew management system and of Integrated Coaching Management System.

The audit have pointed to the number of information security control deficiencies which were either a material weakness or a significant deficiency in internal controls over cyber space. Examples of these vulnerabilities/weaknesses include: (1) Inadequate Physical access and logical access controls (2) A documented security policy had not been framed and circulated among the users (3) granting users access permissions that exceed the level required to perform their legitimate job-related functions; (4) failing to ensure that only authorized users can access critical systems; (5) not using encryption to protect sensitive data from being intercepted and compromised during transit; (6) not updating software with the current versions and latest security patches to protect against known vulnerabilities; and (7) not ensuring employees were trained commensurate with their responsibilities.

It was reported on April 2016, that the IRCTC was hacked and the personal data of more than 10 million users compromised, IRCTC denied the claim. Maharashtra Police's Cyber Cell had

informed IRCTC that it had retrieved a DVD allegedly containing IRCTC customer data from a fraudster group that it had apprehended in the course of some other investigation. A high level committee has been constituted by IRCTC to probe the matter.

According to a Business Standard report, joint team of the Bangalore branch of the Central Bureau of Investigation (CBI) and Western Railways Vigilance Department arrested a man from Basti in eastern Uttar Pradesh for hacking into the IRCTC website to create fake tickets that were to be sold to a network of agents across the country.

Change of Modus Operandi

Existence of above vulnerabilities and the fact that the railways is heavily dependent on computer networks and related technology for its operations and business transaction, favoured the transformation of traditional modus operandi using cyber space and tools to achieve the same malicious objective.

The following table depicts change in modus operandi of criminals vis-à-vis the old modus operandi with the aim of exploiting the vulnerabilities of the railway IT network and applications:

	Traditional MO	**Evolved MO Owing to Digitization**
1	Unauthorized booking agents at PRS centers	• Use private IRCTC ID to book and Sell Tickets • Criminals use software like BLACK TS to book Tatkal Tickets • Criminal Hack IRCTC server to book Tatkal tickets • Technicians engaged by CRIS were allotted a user *id* with most of quota, command and location privileges. These privileges enabled the contractor to issue unauthorized reserved tickets* • Railway personnel misuse site privilege to book tickets* • Transactions were done beyond the time of booking from different terminals of PRS locations.* • CRIS employees with quota, command and location privileges indulge in unauthorized use of these privileges
2	Unauthorized Vendors physically hawk or canvass their product within the railway premises	Unauthorized Vending agents canvass their product to be delivered at trains through internet and mobile
3	Physical interference of the amenities provided for passengers	Interference through cyber space which affects the comfortable travel of any passenger. eg"Denial of Service" (Dos) attack on IRCTC affecting ticket booking
4	Physical obstruction of Railway employee from discharging his duties	Interference/obstruction through cyber space which affects Railway employee from discharging his duties • Hacking Railway servers affecting computerized applications ie, IPAS, IRPSM, IREPS, Control

	Traditional MO	Evolved MO Owing to Digitization
		Office Application (COA), Train Management System (TMS) • "Denial of Service" (Dos) attack on computerized applications
5	Physical interference and tampering of the Signalling and Control gears and Damage of LC gates provided movement of trains	Interference/obstruction through cyber space which affects the critical railway infrastructure • a man-in-the-middle attack on communication channels connecting wayside devices with control room. • "Denial of Service" (Dos) attack on control server • Interruption to traction power by hacking or malware infection of SCADA
6	Physical interference and tampering of the Signalling and Control gears and Damage of LC gates provided movement of trains	Interference/obstruction through cyber space which affects the critical railway infrastructure • a man-in-the-middle attack on communication channels connecting wayside devices with control room. • "Denial of Service" (Dos) attack on control server • Interruption to traction power by hacking or malware infection of SCADA • Cyber-attack on Electronic Interlocking network
7	Theft of Railway cash, material and booked consignments physically	Theft and Misappropriation of railway property through cyber space • By outsider misappropriating railway cash during electronic transaction (NEFT/RTGS) • By railway employee with access to critical information misappropriates railway cash during electronic transaction (NEFT/RTGS/BOOK Transfer) • Data theft by hack of the website in the era of "BIG DATA" (the Railways carries more than 23 million passengers and employing over 1.3 million people.)
8	Abetment and connivance by railway employee and owner of place used for hiding stolen railway property.	• Leaking of critical login information to outsider for siphoning of railway cash • Connivance of Railway employee and Bank staff in misappropriating railway money via electronic transfer.

In order to thwart above modus operandi and detect cyber crime affecting railway and railway passengers, RPF needs to enhance its capabilities by acquiring expertise, know-how and equipments.

Cyber Crime Challenge to Law Enforcement

Given the risks posed by cyber threats the increasing number of cyber-attack incidents and the transformation of the modus operandi, it is critical that RPF in coordination with concerned railway departments take appropriate steps to secure the systems and information. The following challenges have been identified in protecting Indian railways cyber-physical system:

1. Ensuring the reporting of cybercrime

Timely reporting of cyber intrusion goes a long way towards detection of the attacker and minimizing the damage caused. Most of the cybercrime goes unreported leading to compromise of cyber space integrity in long term.

2. Adequate analytical and technical capabilities for law enforcement

To investigate and prosecute cybercrime, RPF needs skilled investigators, latest digital evidence collection gadgets, trained forensic examiners and public prosecutors with cybercrime exposure. Becoming acquainted on the threats to railway systems, as well as gaining a good understanding of all cyber assets and data flows, is essential for protecting the complex and cyber-physical systems in the railways from cyber-attacks and detection in case of any.

3. Seamless inter-departmental exchange of critical data

Continuous exchange of information between operational departments and law enforcement agency helps in collecting the vital cyber intelligence, which can be utilized for averting any cyber attack or intrusion ahead. Also it will help in developing a dynamic cyber security policy which is in tune with the present cyber-physical system.

4. Ensuring forensic readiness at every level

There are complex rules related to admissibility of digital evidence. Without proper forensic readiness on the part of railway departments it will be difficult to find evidence regarding any cyber-attack and further a herculean task in ensuring the admissibility of the found digital evidence.

An efficient and sustainable cyber security posture requires people, dedication and skills in addition to technology. Here are some of the areas of knowledge we believe contribute to a sustainable cyber security approach for rail systems.

Conclusion

To provide safe, dependable, and efficient transportation service, Indian Railways needs to coordinate dozens of different systems, including, e.g., the railway signalling system, train operation system, traction power system, passenger information system, passenger reservation system and asset management system. The increasing reliance of such systems on ICT introduces cyber security risks with complex cyber- physical implications.

The KPMG report on cyber security is a strong indication that traditional, best-practice cyber defenses — anti-virus protection, perimeter firewalls and network intrusion detection systems based on signatures — are easily circumvented. That report also points to the need for organizational readiness, so action can be taken when malicious code is detected. A good understanding of all cyber assets and how they

exchange data with each other is a foundation for protecting the complex systems on which the rail industry depends.

In order to effectively tackle the threats posed by cyber-crime, it is important to institutionalize mechanism for sharing of vital information with law enforcement wing, enhancing the analytical and technical capabilities of law enforcements wing, robust breach notification mechanism to intimate cyber-attack, to investigate the past attacks perpetrated against railway systems and acknowledge preferred tactics, means and procedures.

At a time when rail networks around the world are growing and becoming increasingly automated, cyber security must be at the center of development. There is a need for experts in cyber crime and cyber security to work within and outside RPF for combating cyber crime of the modus operandi shown above and also to enhance cyber security by minimizing system vulnerabilities to thwart the cyber attacks on the ICT systems deployed by IR.

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Organisational Stress and Coping Strategies among Police Personnel: A Study of Chandigarh (U.T) Police

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Abstract

Stress has been emerged as a critical issue in today's era of people possessing busy and hectic lifestyle. Every individual has some extent of stress but with varying intensity and dimensions. When any individual experience stress because of the factors related to his/her job/work in the organisations, it is termed Organisational Stress (OS). Stress is omnipresent i.e. the family, business organisations, social and all other organisations. In the same way, stressors on policemen are not unique compared to working population in general .This have become issue of global concern which needs immediate interventions to save lives of those who protect citizens of whole country. In northern parts of India, the scenario reveals increasing incidence of organisational stress among police personnel. The evident studies have highlighted that more number of policemen dies every year due to increasing stress as compared to deaths due to other reasons. Thus, this study encompasses various aspects related to organisational stress among police personnel in Chandigarh police and to find out the various coping mechanisms used by them for relieving their organisational stress.

Keywords

Ailments & Paradoxes, Organizational, Police Personnel, Stress, Coping Strategies, Police Culture, Informal, Psychological

Introduction

Police officers play a very significant role in maintaining law and order in the society despite all the shortcomings and limitations in the police department especially with regard to the infrastructure facilities, manpower and periodic training. Police officers are supposed to implement all the criminal laws for which they work round the clock and/or without any leave/break, which causes tremendous mental pressure and physical exertion on them. As a result, a few of them may have violent outbursts.

According to National Crime Record Bureau (2013), report crime in India which has force strength of over 17 lakh policemen has seen 235 policemen take their own lives due to stress. This leads to the inevitable conclusion that police officers are not able to cope well with job related stress. The foremost objective of the police is to protect the society by preventing crime and prosecuting criminals. The other police functions such as preservation of the nation's unity and integrity, maintenance of public order and implementation of social laws flow from this main objective.

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All these functions involve the protection of life, liberate, dignity and property of the people and hence the role of the police emerges in the performance of these functions. There was a time when the police functioned as a coercieve force to catch criminals and prosecute them for their miseeds. It was not assigned the tasks which would bring it close to the people in a positive manner. The police were used more for repressing people's movements rather than for helping people in distress. With the social, political and economical changes in the society, the duties and functions of the police have also changed. But after independence the situation has changed drastically. Indian policing is now facing various types of shortcomings.

Ailments & Paradoxes in Indian Police

The police in India suffer with a variety of organizational, procedural, personal and behavioral ailments and paradoxes.

i)   **Colonial stigma:** In spite of their functioning in a democratic set up for more than 6 decades, the Indian Police have not been able to wipe off the colonial stigma attached to them.

ii) **Old and Archanic Blue Book:** The operational and functional Blue-books (IPC, CrPC, Evidence Acts) and even the Indian Police Act are basically colonial in nature and in the contemporary policing contexts. Some of the provisions have become old, archaic and outdated.

iii) **Poor & inadequate PCR:** Police Community relations in India are normally brief, contextual and even negative in nature.

iv) **Poor Image:** The functional image of police in India is not satisfactory.

v)   **Over Centralization:** Indian Police is a functionally centralized organization and no efforts have been made to decentralize the police functions.

vi) **Over burdened organization:** There is an extra-ordinary workload on an average policeman, which has adversely affected his efficiency and performance.

vii) **Ailments & paradoxes identified:** The findings of the various committees and commission constituted to suggest measures about reforming the Indian police have indicated that the Indian Police suffer from a number of organizational paradoxes.

Police Culture

Almost all organizational have a form of culture associated with the values, beliefs and norms that are unique to the occupation and even to the individual organization. In most cases, police officers are influenced by formal organizational structures and expressed organizational values and also by informal values, beliefs, norms, rituals and expectations of other police stress that are passed along through the organizational culture. Police subculture or blue fraternity or brotherhood consists of the informal rules and regulations, tractics and folk passed from one generation of police officer to another. It is both a result and a cause of police isolation from the large society and of police solidarity.

The effects of formal pressure from police organizations and pressures generated by the police subculture often lead police to experience a great deal of stress in their occupational, social and family lives, resulting in cynicism, burnout and retirement on the job as well as a host of physical and emotional ailments. While performing their duties, especially in the period of crisis police personnel suffer from various humiliations and difficulties at various levels. Humiliations from immediate superiors, fellow

citizens, press, other law agencies and even from executives. Urgency and political pressure, sometimes result into breakdown of an honest and efficient policeman. Threat of indiscipline, accountability, incapability, low wages, less holidays, shortage of manpower, overburdened duties, fear of life-death on many occasions, inadequate facilities and service conditions and so on, multiple problems are faced by them. When policemen engage in anti-terrorist mafia operations or anti-naxalite-extremist operations, other people cannot understand the pain and suffering of their family members.

Carter and Radelet (1999) devised a typology of seven police stressors that selectively interact with a police officer's job activities, decision making and organization life.

– Life-threatening stressors (ever-present potential of injury or death).

– Social isolation stressors (Cynicism, isolation and alienation from the community; prejudice and discrimination).

– Organizational stressors (adminstrative philosophy changing policies and procedures, morale, job satisfaction, misdirected performance measures).

– Functional stressors (role conflict, use of discretion and legal mandates).

– Personal stressors (Police Officer's off duty life, including family, illness, problems with children, material stresses and financial constraints).

– Physiological stressors (fatigue, medical conditions and shift-work effects).

– Psychological stressors (Possibly activated by all of the above and the exposure to repulsive situations).

There are further specific work and role regarding factors responsible for organizational stress.

Task demands: Task demands or the task demands can impose high stress levels on police. Quantitative input overload is a result of too many demands for the time allotted, while qualitative input overload is the result of complexity and limited time. These two types of input overload are known as hyperstress.

Role demand: Role demands develop two types of role stress in the work environment-Role conflict and role ambiguity. Role conflict is a result of the inconsistent or incompatable expectations communicated to the person. A role conflict can occur when society's expectations of police behaviour conflict with certain police principles, beliefs and behaviours.

Role Ambiguity is the confusion a person experiences related to the expectations of others.

Interpersonal demands: Abrasive personalities, sexual harassment and the leadership style in the organization are interpersonal demands for people at work. Even with general support by the public, police typically encounter individuals with abrasive personalities-leadership styles are another interpersonal demand that can create stress in the work environment.

Physical demands: Extreme environment, strenuous activities and harardous substances create physical demands for people in the work place.

Career Concern: If an employee feels that he is very much behind in corporate ladder, then he

may experience stress and if he feels that there are no opportunites for self-growth he may experience stress. Hence unfulfilled career expectations are a major source of stress.

Rotating Shifts: Stress may occur to those individuals who work in different shifts. Employees may be expected to work in day shift for some days and then in the night shift. This may create problems in adjusting to the shift timings, and it can affect not only personal life but also family life of the employee.

Lack of Participation in Decision Making: Many experienced employees feel that management should consult them on matters affecting their jobs. In reality, the superious hardly consult the concerned employees before taking a decision. This develops a feeling of being neglected, which may lead to stress.

Lack of Group Cohesiveness: Every group is characterised by its cohesiveness although they differ widely in degree of cohesiveness. Individuals experience stress when there is no unity among the members of work group. There is mistrust, jealously, frequent quarrels, etc., in groups and this lead to stress to employees.

Lack of Social Support: When individuals believe that they have the friendship and support of others at work, their ability to cope with the effects of stress increases. If this kind of social support is not available then an employee experiences more stress.

Effects of police stress

All police officers handle stressors in a variety of ways and in varying amounts, depending on their own personal capabilities and the particular police environment in which they work. Police Officer characteristic have been identified as "stress indicators". In addition to divorce, cigarette smoking and alcohol and drug use, stress indicators include frequent headaches, high blood pressure and stomach ailments. Women police officers face the additional and unique stressors of bias, harassment and underestimated physical ability (Marsh, Kwak and Haarr, 206). Police environment characteristics identified as "stress indicators" include size of the Police department, strength of administrative support, regulations, salary ranges, employment duties number of hours worked and shift rotation schedules.

Management of Police stress:

Stress reduction at organizational level has many related factors to be considered before taking initiatives towards the goal. The major factors are:

Psychological	Physiological	Behavioural
Anxiety	Fatigue	Absenteeism
Mood disturbances	Cardiovascular disease	Drug abuse
Lowered morale	Hormone related problems	Compulsive eating/dieting
Job dissatisfaction	Insomnia	Loss of interest in physical appearance
Reduced quality of working life	Backache, muscle aches	Sudden change of social habits
Depression	Sexual inadequacy	Poor work performance
Emotional exhaustion	Gastric problems	Loss of interest in job activities

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1.   Stress from the work environment

2.   Availability of peer support and trust

3.   Social and family influence

4.   Bureaucratic characteristics of police organizations

5.   Accessibility of coping mechanism

For many individuals stress becomes a dominating factor in their lives leading to stress related disorders. These disorders can be reduced if a person understands how stress occurs, how the effects can damage him or her physically and emotionally and how stress occurs, how the effects can damage him or her physically and emotionally and how she or he can cope with stress. The awareness of stress and is control is the primary focus of stress management (Apgar & Callahan, 1982, Charlesworth and Nathan 1982, Ghermn, 1981). THe responsibility for and method chosen for coping is a matter of individual choice (Gherman, 1981, Reese 1989; Schafer, 1983). Webb and Smith (1980) have stated that stress prevention and alleviation strategies for Police officers are either proactive or reactive.

- Proactive strategies which include training programs, better selection criteria and various administrative methods are designed to prevent the development of stress.

- Reactive strategies which include counseling or rehabilitation programs, attempt to alleviate the damage of stress.

- Peer counseling involving one officer talking with a fellow officer about the problems which she may be experiencing as a result of police work.

- Stressors particular to the individual officer; feeling overcome by fear and danager, pressure to conform.

- Effects of critical incidents.

Coping strategies

Coping refers to attempt to meet environmental demands in order to prevent negative consequences (Lazarus & Folkman, 1984). Coping strategies can be grouped into two main types:

a)   Problem focused coping

b)   Emotion focused coping

The first main approach includes any strategy to deal direct lying with the stressors through overt action or through realistic problem solving mental activities. In these strategies, our focus is on the problem to be dealt with and on the agent that has

induced stress. We acknowledge the "Call to action"; we appraise the situation and our resources for dealing with it and we undertake a response that in appropriate for remaining or lessening the threat. In second approach, we do not look for ways of changing the stressful situation; instead, we try to change our feelings and thoughts about it. The strategy is called emotion regulation. It is a remedial, rather than a problem solving strategy, because it is aimed at relieving the emotional impact of stress to make us feel better, even though the threatening or harmful stressor is not changed.

More specific programs designed to increase effectiveness is coping with police stress included:

1) **The enhancement of self awareness and self-esteem:** Police officers can often decrease the impact of stress by increasing their understanding of the problems they face in police.

2) **Physical exercise and diet:** Activities such as aerobic exercise, Jogging, swimming, tennis and similar activities allow a means of release for built-up stress Diet is another important contribution to the physical well being of police officers who find themselves burdened with shift changes and long hours, which often results in officers eating nutritionally deficient food (McArdle, Katch and Katch, 19960).

3) **Biofeedback and relaxation:** Training and instructing police officers in how to release and control their physiological response has been successful in many stress management programs.

4) **Psychological services and counseling programs for employees and their families:** Police officers know what the stress of police work is. By training selected police officers in counseling and psychological techniques under the supervision of a clinical mental health professional, police agencies have reproted success in reducing stress related symptoms such as alcoholism, drug abuse, and marital problems.

5) The development of a dependable support system (Waters and Usseey, 2007).

Al Organizational level

Torres and Maggard summarized various managerial attempts to address police stress. These attempts are made to help police officers better manage the stress they encounter.

a) Provide employee assistance programs including services to officers and families.

b) Orientation programs for the new officer's transition into the police culture.

c) Pre-academy programs that emphasize physical conditioning

d) Teach coping mechanism related to crime, death, boredom.

Many suggestions have made for reducing stress or learning to cope with stress in the police profession (Fulton, 1999; Waters adn Ussery, 2007). Among the most notable suggestions are:-

1) More efficient pre employment screening to weed out those who canot cope with high stress job.

2) Increased practical training for police personnel on stress, including the simulation of high stress situations.

3) Training programs for spouses so that they may better understand potential problems.

4) Group discussion where officers and perhaps their spouses can "vent" and share their feelings about the job.

5) A more supportive attitude by police executives towards the stress related problems of patrol officers.

6) A mandatory alcoholic rehabilitation program.

7) Immediate consultation with officers involved in traumatic events such as justifiable homicides.

8) Complete false arrest and liability insurance to relieve officers of having to second guess their decisions.

Mathur has also suggested support systems like psychological screening of new entrants, reassignment of workload, increased employee involvement, effective grievance redressal machinery, adequate career planning and genuine concern for employee's welfare.

Organisational stress among Chandigarh Police

In contemporary times, the organizational stresses in the law enforcement personnel i.e. in our police have become quite prevalent. Every alternate day, one gets to read in newspaperss about the suicide cases of police personnel. In Chandigarh, the number of suicides among police personnel has increased dramatically in the past couple of years, making it an issue of very serious concern. Stress has claimed lives of 135 out of 204 cops of the ranks from constables to inspectors in Chandigarh police from January 1, 2010 to March 31, 2019, according to information sought under the RTI act. In response to increasing stress among police, various stress management programmes (Yoga/ meditation, recreational activities/games) are being organized in police departments where police personnel are being given knowledge regarding stress coping strategies. Also, stress management topic has been included in various police courses. The Chandigarh police organize workshops for police personnel regarding stress management. Initiatives are being taken to carry out psychological assessment of police individuals for screening of those who are under stress or are prone to getting stressed in near future so that stress can be managed by early interventions. Thus, there

is a further need for a holistic approach in this favour.

Research methodology

In this study, an attempt has been made to study the organisational stress among police personnel in Chandigarh (U.T.). The study the organisational stress among police personnel in Chandigarh (U.T.). The study focussed on two major issues regarding organisational stress i.e. perception of organisational stress among Chandigarh police, reasons of organisational stress and coping strategies being adopted by them for stress management. For purpose of study, 300 police personnel i.e. 150 male and 150 female police personnel were selected by random and purposive method of sampling. The respondents were selected from all ranks of non-gazetted officers (NGOs) from areas of Security, Law and order, Investigation and Traffic. Both primary and secondary data were used for the study. The data collectionj was done with the help of structured questionnaire, interview and observation method. The questionnaire was designed to assess all aspects of organisational stress among police personnel.

Analysis

Police personnel among Chandigarh Police were asked regarding level of stress which they were experiencing due to various activities in their organisation. Also respondents were asked regarding coping strategies being used to lower their stress continnum. Thus, the analysis was carried out with the help of frequency method by countring number of responses. Further, percentage was calculated and data has been presented in form of tables. The analysis was further divided into two components. In first part, respondent's level of organisational stress was assessed by asking them about how much they feel stressed due to a particular organisational stressor being mentioned in the questionnaire. The respondents rated thier stress level against each

particular stressor as "Low", "Moderate" and "High". In the second part, respondent's stress coping strategies were being assessed i.e. Regarding what type of coping method and how frequently they were using that particular coping method for their for stress management. Accordingly, the respondents mentioned regarding them as "Never", "Rearly", "Sometimes", "Mostly", "Always". Table 1(a) shows level of organisational stress among the respondents due to various types of organisational stressors:

It is evident from the table 1(a) that among the low stressors, majority of police respondents i.e. 63.3% of respondents reported regarding irregular duty hours, 62.3% of respondents reported regarding poor image of police, 62.0% of respondents reported regarding lack of opportunities for advancement, 61.0% of respondents revealed regarding insufficient personal time, 54.7% of respondents reported regarding court proceedings, 52.7% of respondents

reported regarding inadequate salary and 49.0% of respondents revealed regarding working overtime as those stressors which cause low level stress among themselves. On the other hand, among the category of moderate level stressors, 45.7% of respondents mentioned inadequate equipment, 45.3% of respondents revealed poor working environment and 35.7% of respondents revealed that lack of recognition for good work were among those stressors which affected them at moderate level.

It is clear from the table 1(b) that majority i.e. 52.7% of respondents reveabled that they seek emotional support of family and friends by communicating with them as their mostly used stress coing method. When asked regarding how frequently they were using drinking for their stress coping, majority (33.7%) of respondents reported that they sometimes used drinking for coping with stress. Regarding relaxation exercises, majority (34.7%) of respondents reported that they rarely

Table 1 (a): Organisational Stressors

		Low		Moderate		High	
		(n)	(%)	(n)	(%)	(n)	(%)
1.	Irregular duty hours	190	63.3%	27	9.0%	83	27.7%
2.	Inadequate salary	158	52.7%	40	13.3%	102	34.0%
3.	Insufficient personal time	183	61.0%	27	9.0%	90	30.0%
4.	Court proceedings	164	54.7%	39	13.0%	97	32.3%
5.	Working overtime	147	49.0%	15	5.0%	138	46.0%
6.	Lack of opportunity for advancement	186	62.0%	54	18.0%	60	20.0%
7.	Inadequate equipment	83	27.7%	137	45.7%	80	26.7%
8.	Poor working environment	92	30.7%	136	45.3%	72	24.0%
9.	Lack of recognition of good work	98	32.7%	107	35.7%	95	31.7%
10.	Poor image of Police	187	62.3%	65	21.7%	48	16.0%

Table 1(b): Coping methods

		Frequency(n)	Percentage(%)
Communication with Friends & Family	Never	0	0.0%
	Rarely	1	0.3%
	Sometimes	69	23.0%
	Mostly	158	52.7%
	Always	72	24.0%
Drinking	Never	25	8.3%
	Rarely	65	21.7%
	Sometimes	101	33.7%
	Mostly	81	27.0%
	Always	28	9.3%
Relaxation Exercises	Never	43	14.3%
	Rarely	104	34.7%
	Sometimes	73	24.3%
	Mostly	52	17.3%
	Always	28	9.3%
Leave from Duty	Never	27	9.0%
	Rarely	46	15.3%
	Sometimes	132	44.0%
	Mostly	64	21.3%
	Always	31	10.3%
Expert Counselling	Never	200	66.7%
	Rarely	64	21.3%
	Sometimes	33	11.0%
	Mostly	3	1.0%
	Always	0	0.0%
	Total	300	100.0%

perform relaxation exercises for distressing themselves. Regarding taking leave from duty, majority (44.0%) of respondents stated that this was the coping method which was sometimes used by them. When asked regarding expert counselling, majority (66.7%) of respondents denied that they ever sought expert counselling for coping with their stressful job conditions.

Findings and Discussion

The analysis of data regarding level of organisational stress among police personnel in

Chandigarh revealed the findings that they were suffering from some level organisational stress. Based on the level of stress originating from different type of organisational stressors, the findings have been categorised into three categories:

(i)   **Low level organisational stressors:** The findings have revealed that irregular duty hours, inadequate salary, insufficient personal time (for tea/lunch break), court proceedings, lack of opportunities for advancement and poor image of police were among the low level stressors for police personnel.

(ii)   **Moderate level organisational stressors:** It was found that police personnel experienced moderate level of stress from organizational stressors like poor working environmental conditions, lack of adequate working equipment and lack of recognition for good work or achievements.

Regarding findings related to coping strategies, the data revealed that Chandigarh police personnel were adopting some kind of coping methods to lower their stress level. The findings have been categorized as follows:

(i)   **"Mostly" used Coping method:** The data revealed that communication with relatives and friends were being used as mostly used coping method by police personnel.

(ii)   **"Sometimes" used Coping method:** Another majority of police personnel reproted that taking leave from duty and drinking alcohol helped them in coping with their job stress at sometimes.

(iii)   **"Rarely" used Coping method:** In this cateogy, majority of police personnel reported that they rarely made use of relaxation exercises for relieving their organizational stress.

(iv)   **"Never" used COping method:** The data revealed that expert counseling was mentioned as never used coping method by majority of police personnel in Chandigarh police.

Suggestions

The increasing cases of suicide among Chandigarh police point toward an urgent need for stress prevention strategies and the needful interventions among police personnel. The findings from this study have also revealed for immediate call of stress coping strategies at individual level and at organisational level in Police organisation. Thus, by implementing following stress management strategies in addition to already taken initiatives, organisational stress can be halted up to a great extent:

(i)   Training should be given to new recruitees regarding stress management in the form of orientation programmes. Refresher courses should be organised at regular intervals for in-service police personnel.

(ii)   Awareness should be increased among police personnel regarding causes, symptoms and ill–effects of stress. Also, they should be given knowledge regarding use of various coping strategies for stress management.

(iii)   Informal gatherings or programmes should be organised at departmental level so that police personnel benefit from sharing their ideas/thoughts and destress themselves with recreational activities.

(iii)   Motivational programmes should be organised at organisational level because most of the police personnel use self motivation for coping with stress.

(iv)   There should be arrangement for expert counselling for the police personnel who are distressed.

(v)   Effective feedback system in the organisation can help in assessing stress cases at early stages and taking interventions as early as possible.

(vi)   Family programmes should be organised for families of police personnel because family has greater influence on stress level of police personnel. Even distressed family members can benefit during family therapy sessions.

(vi)   Workshops/Seminars/Conferences should be organised in Police departments focussing on different issues of organisational stress.

Conclusion

Though stress is considered as inevitable part of police personnel's life, yet it can be reduced to lower level by various interventions. Collaborative efforts from police personnel themselves and their police organizations can prove to be beneficial in stress management. Suggestions about reducing stress at individual level include proper time management, good personal planning, positive thinking, enhanced self esteem and awareness, meditation, regular vactions, self devevelopment, goal setting, holistic yoga exercises, mind stilling practices whereas organisation strategies include providing need based counseling services, recreational programmes, appreciation for achievers and organizing programmes for spouses and family of police personnel. Efforts should be made towards increasing police-people ratio, reducing workload, clear job description, Good interpersonal relationship between senior and sbordinates, sense of mutual trust and cooperation between colleagues, improving image of police, preventing media from providing harsh and distorted reports regarding police activities can help to a great extent in alleviating increasing stress in police organisation.

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Will Society Let Female Offenders to Lead a Normal Life?
A Study on the Perception of Police towards the Challenges in Reintegration of Female Offenders

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Abstract

Female crime by definition refers to the crime committed by females and this crime classification is based on gender perspective. The classification is to explore the causes of female crime and make prevention. In present scenario the number of females engaging in criminal activities is on the rise. The recent report of National Crime Records Bureau (NCRB) regarding the prison statistics states that female offender population in prison is increasing every year. (Prison statistics of India, NCRB 2015). Generally offenders are sent to prison in order to prevent them from committing further crimes, to rehabilitate and to reintegrate into the society. Though, male offenders are more in population, many research studies proves that the impact of prisonization is high among the female offenders. If female is behind bars it has harmful effect on her family as well as the society. The female prisoners seldom get acceptance from the family and society which makes reintegration a difficult process and paves the way for relapsing into criminal career. The role of police in offender's journey to prison is significant. They act as gate keepers of criminal justice system. Since they have a constant interaction with offenders, it is necessary to seek the opinion of police to identify the challenges and thereby to develop measures for successful reintegration. Hence, the paper attempts to study the perception of police towards the challenges of reintegration of female offenders. Respondents of this empirical paper constitute 100 police personnel in the rank of Inspectors, Sub Inspectors and Special Sub Inspectors from Greater Chennai Police. Further, the paper attempts to find out the perception of police towards the challenges of reintegration of female offenders such as denial of job opportunities, negligence from family and society, social stigma, changes in the mental health of the offenders due to prisonization, suspicion from police. This paper also tries to develop certain measures for the successful reintegration of female offenders through the perception of police.

Keywords

Author's Intro:
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Introduction

Female crime, by definition, refers to the crimes committed by females. It is a crime classification which is made from gender perspective. The classification is to explore the causes of female crime and make prevention (Anju & P.K 2002). At the present scenario females have marked their hands in all spheres of life including the world of crime competing with their male counterparts (Smriti, 2009).When a female encounters a criminal justice system, she has been charted more offensive than male as she has violated both social and legal norms. Criminal Justice process is the entire system of criminal prevention, detection, apprehension, adjudication and punishment. It includes all those agencies such as police, correctional institutions, courts and legislature that are responsible for enforcing criminal laws (Ram, 1969). Female offender's journey through the criminal justice system could have made a complete change in their behaviour, which needs special care and assistance to get back to normal life. Earlier the concept of punishment is exclusively meant for deterrence. Prisonization is used as a method to handle offenders in such a way to protect and prevent them from committing further crimes for specific period of time and also prevent others from committing crime against the offenders out of vengeance. The concept of punishing offenders through prisonization has recently been changed. The prison authorities adopted an approach of treatment and rehabilitation with a view to modifying the criminal tendencies of offenders (William & Christopher, 2004). According to the study conducted by Rujjanavet (2008) in Department of Corrections, Ministry of Justice in Thailand reveals that placing offender in custody alone is not sufficient to solve the problem of crime. Prisonization only removes the offender temporarily from the community. After the release they are free and there is a chance of relapsing into the criminal activities.

The ultimate goal of correction is the successful reintegration of offenders into community. Unsuccessful reintegration and recidivism of offenders show the incapability of correctional department in their functioning. As per the study, key role of correctional department has shifted from punishment to rehabilitating initiatives of offenders for the successful and complete reintegration of offenders. But, culture of correction is often in conflict with the culture of treatment. The corrections culture is based on control and security and thus discourages women from coming together, trusting others, speaking about personal issues, or forming bonds. Women who leave prison are often discouraged from associating with other women who have been incarcerated. Treatment however is necessarily based on concern for the women's safety and on the need to help them to lead a normal life in society.

Hence, the problems of released female offenders have become a serious issue which needs immediate concern and proper policies to address. In literature, studies explain as to who is going to prison and causes of their prisonization. However, we are less informed about the post release life of an offender, especially female offender. Common people may not be aware about how female offenders manage or if they are ready for the process of reintegration. Before that few questions should be answered like 'Are we ready to accept them? Are we ready to see them as our family members, neighbours and co-workers? For few female offenders, the process of reintegration is smooth like acceptance from family, job opportunity and supportive network to lend a hand to restore their status in society. But majority of released female offenders, experience ignorance from family and society pointing their criminal behaviour (Brien, 2002). In India, there is a dearth of data available on female offenders who were released from prison

and this makes a vacuum in understanding the magnitude of the problems faced by female offenders after their release.

According to the recent NCRB statistics, the number of female convicts has increased gradually. The prison population in India comprises 32% (134168) of convicted offenders. Among the convicted offenders, 95.7% (128428) are male and 4.3% (5740) are female in 2015. The preceding year statistics (male: 95.9%, female: 4.1%) on convicted offenders reveal that proportion of female convicts slightly increased in the year 2015. (Prison statistics of India, NCRB 2014 & 2015).The increase in convicted offenders raises few concerns such as deterrence of punishment in preventing crime and rehabilitative nature of prison system in preventing relapse among the offenders. The prison system focuses on "3" R's i.e. rehabilitation, reformation and reintegration. Former two are the process which an offender undergoes when he/she is serving the period of sentence in prison. Reintegration commences after the release from prison. There are more programs for the rehabilitation and reformation in prison and lack of attention in the reintegration process results in failure of rehabilitation and reformation, which leads to relapsing into criminal career (Brien, 2002). In criminal justice system, reintegration refers to the process of re-entry of an offender in all spheres of life such as reuniting with family and society, regaining the social status, acquiring job opportunity, coping with stigma of prisonization. Since the reintegration process of an offender begins after the release from prison, the training and assistance provided during the prisonization to offenders will smoothen the process of reintegration.

Various studies on reintegration put forward that family separation, community isolation (Dodege & Pogribin, 2001), poor quality of life conditions (Shinkfield & Graffam, 2009), mental illness (Hartwell, 2001), lack of secure, stable and legal employment (Blitz, 2006) are significant factors which should be addressed to make reintegration successful. Further, Bureau of Justice Statistics report (2012) claims that there is a correlation between failure of reintegration and reoffending with lack of finding and maintaining employment, finding stable housing, reuniting with children and family, significant social support network and continuity of substance abuse treatment. In order to reduce reoffending, reintegration interventions should focus on criminogenic needs of the offenders. Criminogenic needs are those characteristics or situations that increase the risk of reoffending. Moreover, the rehabilitative treatment should be given in a style and mode which matches the learning ability of the offenders (Blanchette & Taylor, 2009).

In the process of reintegration, police personnel have a major role and act as gatekeepers of criminal justice system. Further, Police station is considered to be the place where an offender begins their journey to the criminal justice system. Police personnel also have a responsibility of monitoring the ex-convicts in order to prevent them from relapsing in to crime. Police officers are drawn from general public, and it is hoped that they are the representatives of that population. However, studies indicated that they differ from general public in various ways. Though, they are part of general public, their opinion regarding offences and offenders are different from others (Reiner, 1985; Young, 1991). For instance, studies have shown that police personnel have more negative attitude towards offenders than non-police personnel. It was predicted that police officers' attitude towards female offenders would be more positive than those towards male offenders. At the same time, no gender difference belief exists among non-police personnel i.e. general public about offenders. There is evidence of belief that female offending is due to situational factors or individual pathology (Horn & Hollin, 1997).

Police officers play a significant role in criminal justice system and their decision making is a pivotal part in determining who is regarded as 'criminal' (Foucault,1977). Attitude of police officers towards female offenders varies according to certain factors. Education, income and nature of crime are the social factors that strongly influence the manifestations of police behaviour towards female offenders. More educated offenders experience relatively tolerable behaviour from police (Shereen, 2005). The above studies show the difference in police attitude from general public towards offenders. Since, the police officers have a major role in criminal justice system; their attitude has a significant influence on the reintegration process of the offenders. Though the police personnel are encountered in the early stages in the process of criminal justice system, they interact more often with the offender. Further, the police personnel work at the grassroots level, so they understand the problems of the offenders in a better way. So, there is a need to study the perception of police towards the challenges in the reintegration of female offenders.

Hence, the paper highlights the challenges in reintegration of female offenders such as isolation and labelling from family and society, denial of job opportunities, changes in the mental health of the offenders due to prisonization and suspicion from police. It also attempts to develop certain measures to enhance the reintegration of female offenders based on the perception of police.

Methodology

This paper focuses prominently on two aspects i.e. perception of police towards the challenges of reintegration of female offenders and to develop measures to overcome these challenges and makes the reintegration of female offenders possible. Police personnel have an integral role in the process of female offender's journey through the criminal justice system right from the arrest. They have a constant interaction with offenders either male or female. Hence police officers can easily identify the problems which could be barriers for the reintegration as well as to suggest certain measures about avoiding relapsing and for successful reintegration. Locale of the study is Greater Chennai Police Jurisdiction, and it is divided into four zones for the administration. The zone is further divided into twelve police districts; each zone is headed by a Deputy Commissioner.100 police officers were identified from twelve police districts on the basis of purposive sampling technique for the study. Respondents of the study constituted Inspectors, Sub Inspectors and Special Sub Inspectors of Greater Chennai Police. A structured questionnaire was used to collect data. Open ended and Likert Scale was used to measure the perception of police numbering 'strongly disagree', 'disagree', 'neutral', 'agree', 'strongly agree' in 1 to 5 order. Frequency tables and graphs are used to represent the data analysed through statistical Package for Social Science (SPSS).

Results

Results of the study have been discussed in the forthcoming section. It includes profile of the respondents consists of gender, designation and years of service of the respondents in police department. Later this section explains the challenges female offenders experience in the process of reintegration and finally discusses the measures for enhancing the reintegration through the perception of police. SPSS was used to analyse collected data from police officers.

Profile of the Respondents

Table 1: Profile of the Respondents

Profile of the Respondents		
Gender		
Gender	**Frequency**	**Percentage**
Male	76	76%
Female	24	24%
Total	**100**	**100%**
Designation		
Designation	**Frequency**	**Percentage**
Inspectors	30	30%
Sub Inspectors	53	53%
Special Sub Inspectors	17	17%
Total	**100**	**100%**
Length of Service(in Years)		
length of Service (in Years)	**Frequency**	**Percentage**
1 - 5	1	1%
6 - 10	21	21%
11 - 15	16	16%
16 - 21	28	28%
21 - 25	6	6%
26 - 30	24	24%
31 - 35	4	4%
Total	**100**	**100%**

Table 1 is categorised into three heads, where first part describes the gender of the respondents selected for study, second part shows the respective designation of respondents and finally last part of the table reveals respondent's number of years in police service.

First part of the table 1 distinguishes the gender of respondents. According to the data shown in the table majority i.e. 76 respondents are male police officers, whereas 24 are female police officers, which constitute the total number of respondents. Police department is considered as one the most masculine forces. Females were not a part of the force for a long time due to the nature of the duties police officers are entitled. In later period females also became the part of the force. Yet, the strength of female officers remains less than their male counterparts'.

Second part of the table 1 reveals the designation of the respondents such as Inspectors, Sub Inspectors, and Special Sub Inspectors. It is clear from the table that majority of respondents fall under the rank of Sub Inspectors who are 53 in number. Inspectors and Special Sub Inspectors share successive positions with a number of 30 and 17 respectively. Generally a station consists of 3 inspectors to handle law & order, crime and traffic department respectively. Hence their number would be less while comparing with Sub Inspectors. Special Sub Inspectors is the rank awarded to head constables with a service more than of 20 years who had also less strength in police stations.

Third part of the table 1 exhibits the respondent's number of years in police service in their respective ranks.16-20 is the category where majority of respondents belong. 1-5 is the category for least respondent as per the data available in the table. While considering the work schedule of the police officers, their duties are not confined to police station alone. Station strength is distributed into different duties for proper policing and smooth functioning of police station. This results in difficulty in the collection of data by meeting them in person. Officers with service of more than six years in police department were given priority while collecting the data. Because of the service experience, their perception towards female offenders and

challenges female offenders encounter after the release from prison is more informative and valid than that of the officers with less service in police department.

Challenges in the Reintegration of Female Offenders

Before designing any strategy for reintegration, it is essential to identify the factors that lead an offender to relapse. Male and female offenders experience some sort of similar challenges during their reintegration into society; the intensity, specificity and multiplicity of their needs and proper measures to identify these needs vary. As noted by Brien (2002) concerning the re-entry of female offenders, she supports the fact that even though male and female encounter some sort of similar challenges, due to sexism and racism female offenders are less equipped to overcome the challenges. In other words, female offenders are the minority in criminal justice system and all these correctional programmes in the prison are framed accordingly to rectify the problems of majority i.e. male offenders. Thus they are not addressing the problems of female offenders properly. Impact of prisonization is high among female offenders. If a female is behind bars it has an adverse effect on her family as well as society. The female prisoners seldom get acceptance from the family and society, which makes their reintegration a difficult process.

While emphasising challenges, it has two parts i.e. direct and indirect. Direct challenges include problems that particular female offender encounters after her release whereas indirect challenges are the complexities her family has gone through especially husband, children and immediate family members like conflict in interpersonal relationship, isolation from society, stigmatisation of their children in school and among peer group. Furthermore, in violent crimes victim is known to offenders. For instance victim will be husband, children, in laws

or other close relatives as well. As a result of these indirect challenges female offender's family is not ready to accept her into their life again.

Few prominent challenges that seemed to be the hindrance to the reintegration of female offenders were drawn from the perception of police. Such as denial of job opportunities, negligence and isolation from family and society, mental health status, social stigma and suspicion from police are discussed in forthcoming section.

Denial of Job Opportunities
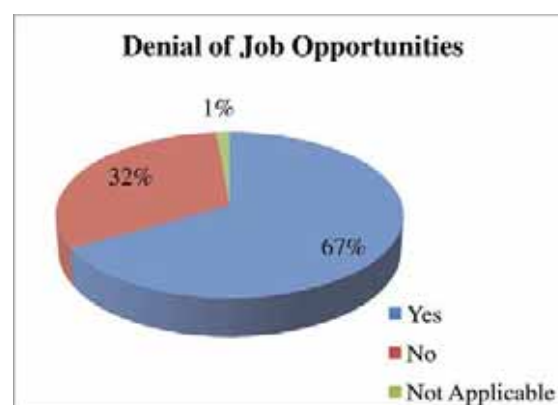
Fig. 1: Denial of Job Opportunities

Fig. 1 explains denial of job opportunities acting as a hindrance to reintegration. 67% of the respondents opine that it has an adverse effect on the reintegration process. 32% of respondents say that denial of job opportunities is not a reason for the failure of reintegration.

Being employed is viewed as a most difficult task for released offenders, as they belong to a disadvantaged community and with unacceptable behaviour. A large number of female offenders remain unemployed not only because they lack job skills or work history but also because they suffer from the social stigma as an offender (Brien, 2002). Results of the study on the rehabilitation and reintegration of female offenders by Arjun et.al (2018) describe that lack

of education and employment are viewed as barriers to the successful reintegration. Vocational training and counselling are very important because they can empower female offenders. With no financial assistance, there is a chance of their putting themselves in illegal activities like prostitution, drug trafficking to meet their needs. Study also attempts to explain the role of NGO's in providing employment for released offenders. It suggests self- employment opportunities like organic farming; gardening and fine arts like painting can be useful. Mridula (2004) points out that facilities for education and vocational training for earning wages are not provided for women in most prisons. They are given unproductive assignments. Thus there is a need to introduce work programmes for female offenders to earn extra remission, providing them facilities for education, giving them training in crafts which will enable them to become self reliant and empowered.

As a part of rehabilitation and reformation process, certain vocational training is imparted to inmates in prison. This training is not sufficient enough to make them financially independent. The vocational training given in prison is mostly of outdated skills and also it is not based on the interest of female offenders, which again makes the job opportunity a herculean task. Label which they possess even after the release from prison will reduce their chance of being employed. No employment providers will entertain a person with a criminal record. A notable point to be considered is the age and physical health status of the female offenders after the release. Normally female offenders who are convicted for 10 – 15 years would have spent major portion of their life in prison and will be released in their late 60's. Due to the mental and physical health problems which are not paid proper attention to during prisonization would have made them physically unfit for a job after release.

Negligence from Family and Society
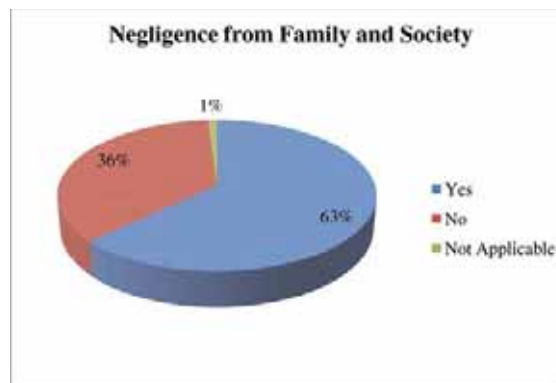
Fig. 2: Negligence from Family and Society

The Fig. 2 shown above illustrates that majority of the respondents are of the view that negligence from family and society badly affects the re-entry of female offenders. It is considered as the second prominent reason for the failure of reintegration. 36% of respondents disagree with latter's view that rejection from family and society has not much impact on the reintegration.

Family is the most important social group in the society. It is one of the primary agencies of socialisation that turns a biological being into a social being (Anju & P.K, 2000). Support from family has a great concern and influence on the success of reintegration. Normally females have inherent nature of being loved and supported by their family members especially during the hard times. Stable family relationships and community ties will work as a boost to reduce the re-offending among female offenders (Priyamvadha, 2015). Berien (2002) also holds up the fact that imprisonment period of female offender has weakened their relationship with family and society. Without means of family and society networks and financial support, the probability of recidivism is high among female offenders.

Police officers co-relate certain facts as a reason for the negligence of female offenders. Offenders longer stay in prison is viewed as a total breakdown of family ties. In the case of violent crimes, the victim is always known to female offender such as husband, immediate family members, friends and neighbours. Victim offender relationships due to the crimes committed by female offenders harden the acceptance of them back into family. It is not easy to forgive a person who takes away the life of a family member. This hatred among family members may endanger the life of female offender after the release. The stigma attached to the female offender makes a negative impact on the family. The female offenders may undergo isolation and rejection from the rest of society. Children of female offenders would be called and stigmatised as offender's sons/ daughters, which leads them to hate their mothers and disown them. But in the case of drug trafficking and prostitution, sometimes children may take over the path of their mothers. Probability of delinquency is high among the children of female offenders comparing with other children due to the lack of love and care of parents. Even though female offenders are less in offenders' population, the consequences of their criminal act is suffered not only by them but also by their children, family and society.
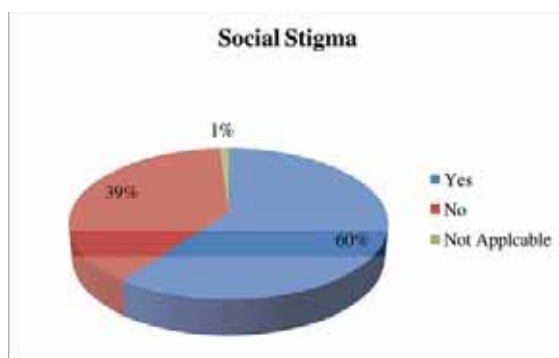
Social Stigma

Fig. 3: Social Stigma

Social stigma is believed to be the other reason for the failure of female offender's reintegration. 60% of the respondents agree how stigma or labelling has obstructed the way of successful reintegration. Majority of the respondents hold a view that once a female is labelled as an offender, it will be for life time. She is considered as an offender even if she is ready to change and correct herself. This stigmatisation and labelling has adverse effect on their children and immediate family members as well. Society has a common tendency to isolate those who do not fit in with culture and norms. Children of female offenders are called offender's sons/ daughters among their peer group and are isolated. This will have a negative effect on the socialisation process of children. The intensity of social stigma or labelling followed by the commission of crime by a female is grievous as she is violating both the legal terms and social norms prescribed by society for a woman to follow (Rani, 1987).

39% of respondent hold a view that contradicts former's opinion; social stigma is not a challenge for the reintegration. It is not considered as a barrier to female offenders who are engaging in certain crimes like pick pocketing, prostitution and drug selling. Majority of these offenders belong to the lower stratum of society and they would be hailing from slum where everyone around them is engaging in these kinds of criminal activities. Therefore the concept of labelling is not a point to be concerned about among them. Criminal behaviour is pinned on them as normal routine of their life.

Braithwaite (1989) through his theory "Reintegrative Shaming" explains that society will have only lower crime if they communicate shame about crime effectively. Society will have lots of violence if violent behaviour is not treated as a shameful act. This is called positive shaming or prevention of crime which stops people from engaging in criminal activities due to the shame

accompanied with the commission of crime. In positive shaming the criminal act is taken as wrong and offender as good person who commits a wrong, through the proper communication of reintegrative shaming, the society will make the offender understand that his act was wrong and it caused shame for him and society. This results in a barrier to them from engaging in further criminal activities. Next part of the theory explains 'stigmatization', it is called disrespectful shaming where offender is treated as bad person with a stigma throughout his life. Reintegrative shaming aims at positive prevention of crime whereas stigmatization is unforgiving to the offender and criminalising them. In the current research, it is inferred that regarding the social stigma, majority of police officers state that stigmatization of offender causes negative reintegration because society has labelled them as criminals and not allowed them to change even though they wish to lead a normal life. Rest of the respondent agree that stigmatization is not a challenge to reintegration. Everyone among them believes that what they are doing is a part of their normal daily routine not a criminal act. Hence, to an extent it is possible to curb the criminal activities of offenders in this category by proper communication of crime shamefulness among them.

Mental Health
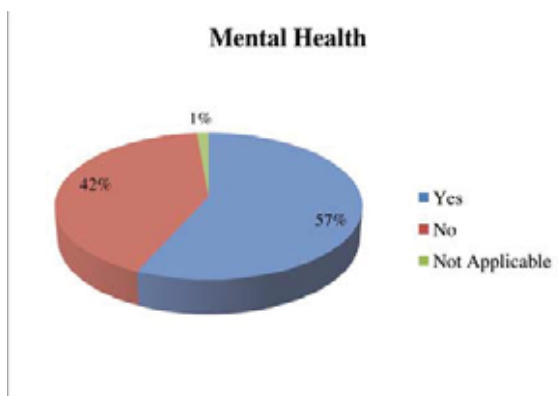
Fig. 4: Mental Health

Fig. 4 conveys the impact of prisonization on mental health of the female offender. 57% of respondents state that unstable mental health status as factor prevents the offender to reintegrate. Although it is inferred that, above factors such as denial of job opportunities, isolation from family, social stigma may also results in unstable mental status. On the other hand 42% of respondents hold a view that unstable mental health status is not a reason for failure of reintegration.

Compared to male offenders, female offenders are very sensitive and their emotional bond with family is stronger than that of the former. Normally the life of female is bounded with the four walls of family. Hence it is important that the female offender should be given a chance to fulfil her parental responsibilities. It is the responsibility of prison authority to provide proper medical and psychological assistance to the offenders. In case a female offender is suffering from mental illness, when she comes out of prison, there is a chance of relapsing because the problem still subsists in her which can come out anytime (Mili et.al 2015). Prison is always an unpleasant place and life of prisoners is pathetic. Prison is a place meant for isolation and separation which affects the mental and physical well being of prisoners. Prisonization is the most painful part of offender's life. Prison life is difficult for both male and female offenders but it has more disadvantages on female offender's life. Sometimes female offenders become victims of sexual acts like rape, physical torture and mental harassment, which, in turn, worsens their mental status (Douglas et.al, 2009). Sanyal (1975) studies 23 females who have been in prison not less than 3 years imprisoned mostly for murder. They all were generally physically healthy but experiencing considerable depression, insecurity and instability. Research studies also proved that female prisoners are affected by mental health problems like anxiety, depression, insomnia and

other major and minor ailments. The perception of police officers in this study also conveyed the same result and suggested for appropriate remedial measures for successfully reintegrating them into society. Even though a few facilities such as yoga, meditation and recreational activities are arranged in prison for prisoners, the extent of their effectiveness in the process of rehabilitation remains as a question mark.

Suspicion from Police
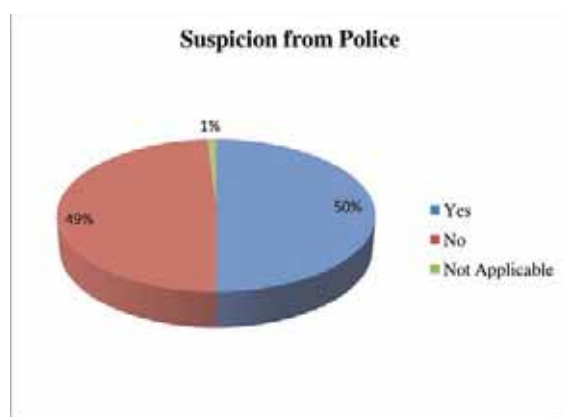
Fig. 5: Suspicion from Police

Figure 5 implies that 50% i.e., half of respondents have the same opinion that police have a normal habit of suspecting the female offenders even after their release from prison. 49% of respondents disagree on the point that police will suspect female offenders after the release.

Social stigma and suspicion from police have a direct relationship. Suspicion from police after the release will intensify the stigmatisation and labelling of female offenders thereby making reintegration unachievable. Police suspicion against offenders varies according to the nature of the crimes committed by them. Chances of suspicion are high for certain crimes like pick pocketing, drug selling, prostitution, chain snatching, bootlegging and shop lifting. According to the respondents' view, during certain occasions like festival season police will keep monitoring few gangs constantly engaging in pick pocketing and chain snatching. And also they will warn general public to be careful to avoid victimisation. While considering violent crimes the intensity of suspicion is comparatively less against female offenders.

Police suspicion has a negative impact on the reintegration of offenders. During the process of rehabilitation, offenders may be reformed and ready to be a law abiding citizen. After release if the police keep suspecting them and take them into custody; if the offender is innocent, they might not continue to be law abiding citizen anymore. This may result in further persistence of crime commission by them. There is always a correlation between official interventions, particularly police intervention and crime commission. The police intervention results in a negative social response in the community, which in turn leads to unsuccessful reintegration and relapsing into criminality again. Hence the positive policing without accessing the innocent will help in positive reintegration.

Measures for the Reintegration of Female Offenders

The pivotal concept of Braithwaite's (1989) reintegrative shaming is positive prevention of crime which is possible by giving awareness to the offender that the act they are engaging in is shameful to them and society. Here, offender is considered as a good person and his act is treated as bad. He also says that reintegration can happen successfully by incorporating the offender into general society rather than isolating them due to their criminal background. It is a widely recognized fact that mechanism to enhance the reintegration of offenders is an essential part of any strategy to reduce recidivism. In general when the offenders are prepared for their reintegration into society after the completion of sentence, authority should express due concern for their family and society

as well. Since the offenders are reformed and equipped during prisonization to lead a normal life, the family and society should be trained to accept the reformed offenders. Authorities should provide awareness to public regarding the rights of a reformed offender to help them to live in society like other people. While considering the correctional program status in India, significant attention has been given to rehabilitation and reintegration in the trilogy of "3" R's in correctional program. Reintegration part of the correctional program has remained as a silent phase as it is a phenomenon outside the walls of prison.

As discussed above, the impact of prisonization is severe among female offenders due to the prescribed gender roles in society. This indicates the requirement of a gender based approach to correctional programs. Though the number of females engaging in criminal activities is less while counting with total crime rate, the impact of female criminality is viewed as the complete breakdown of society's morality. Hence it is necessary to identify and implement certain measures to curb the number of females engaging in criminal activities. On the basis of the study conducted, certain measures are suggested by police officers for the effective reintegration of female offenders. These measures are discussed in forth coming sections.

In the graph 1, majority i.e., 51 respondents claim that training program for family members of female offenders are mandatory. 36 respondents strongly agree with the former's opinion. 6 of the respondents remain neutral about the statement and 3 respondents disagree on the need for training program for family members and for 4 of respondents the statement was not applicable.

Post release, female offenders experience difficulty in coping with family environment due to rejection, which again paves way for relapsing. Ultimately the reintegration is meant for the overall integration of female offenders into all spheres of life and relationship. Through the process of prisonization, an offender is rehabilitated, reformed and modified to be a law-abiding citizen. Therefore, to accept offenders, family members need to be trained in a manner where they can understand and motivate the offender to lead a normal life. In addition, there is a victim offender relation among the crimes committed by female offenders, especially in violent crimes. In majority cases victim would be the immediate family members like husband, in laws and relatives. In these circumstances, the family requires constant counselling and training to forgive the offender and accept her. The family should give immense support and courage to female offenders to overcome all the challenges after the release.

Training Programs for Family Members

Frequent Meeting with Family Members

Graph 1: Training Programs for Family Members
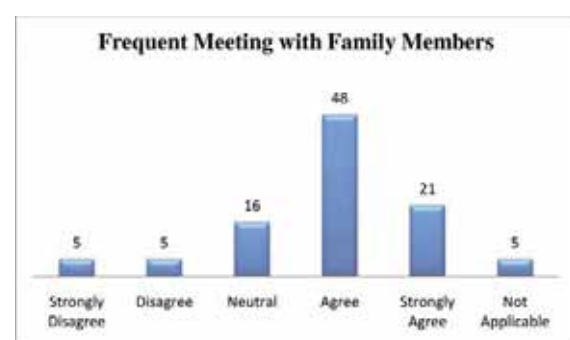
Graph 2: Frequent Meeting with Family Members

Graph 2 shows the need for frequent meeting with family members for the proper reintegration of female offenders. When it comes to the matter of reintegration, it is evident from the above graph, that majority i.e., 48 respondents agree that frequent meeting with family members can make reintegration an easy task. 21 respondents strongly agree with the fact whereas 16 respondents stay neutral about the statement. In contrary to majority of respondent's opinion, 5 respondents strongly disagree the statement.

Many research studies indicate that the maintenance of family ties during imprisonment is desirable, but it is difficult due to various reasons. The predominant reasons can be the distance between the prison and the place of residence of the family members, social stigma, vengeance, disowning etc. But there are also benefits if there is a frequent visit which includes decreased rates of recidivism following imprisonment, improved mental health of inmates and other family members and increased probability of reintegration of the family household following imprisonment. Anju & P.K, (2000) emphasis through the study entitled "Female Criminality in India "which was conducted in three different female prisons in India that female offenders lodged in prisons have not been visited by any of her family members or by their in-laws family. These females are more worried about their future after release. Most women in the correction system are mothers, and major consideration for these women is reintegration with their children. Most painful issue facing female offenders in prison is separation from their children. A few prison authorities establish proper facilities for the children to pay visits to their mothers in prison. However, the problem of distance from children, foster care and anxieties remain unsolved (Potter et. al, 1979). Hence the perception of police reflects that the maintenance

of family relationship during imprisonment is important for successful reintegration.

Restorative Model of Justice

The restorative model of justice is a model for assisting female offenders. They prepare to reintegrate themselves into their neighbourhoods and communities. The framework for restorative justice involves relationships, healing and community-a model in keeping with female psycho-social development. To reduce the likelihood of future offending among known lawbreakers, official intervention should emphasise restorative rather than retributive goals. Then there will not be any conflict between culture of corrections and culture of treatment. Through this model the process of reintegration is likely to be smooth and the state of recidivism can also be reduced considerably.

Monitoring Authority to Avoid Relapsing

Graph 3: Monitoring Authority to Avoid Relapsing

Graph 3 illustrates the necessity of establishing monitoring authority especially for female offenders to avoid relapsing. 46 respondents agree that a monitoring authority should be established to avoid relapsing of female offenders. 27 strongly agree with this point where as 15 respondents remain neutral about the statement. 5 respondents disagree and 3 strongly disagree with the establishing of a monitoring authority. The question was not applicable to 4 of the respondents.

For female offenders transitioning from prison back to the community typically requires a strong monitoring mechanism, and there is a critical need to develop a societal support system that provides assistance to women transitioning from prisons back into the community. Service providers need to focus on women's strength and they need to recognize that a woman cannot be treated successfully in isolation from social support network. Coordinating system that connects a board range of network and service will ensure successful reintegration. Such a comprehensive approach provides a sustained result and the rate of recidivism could be definitely be reduced.

Conclusion

The alarming rate of females engaging in criminal activities grabs the attention of police as well as researchers. While studying about female criminals, it is necessary to adopt a gender sensitive approach due to their respective roles particularly in family and generally in society. Because crime is viewed as a male dominated space and all the programs for offenders are male-oriented, which are not suitable for female offenders. Gender has a significant role in the process of reintegration. All the planning and policies are to be made in line with gender responsive framework to facilitate successful reintegration of female offenders. Hence, this study lays emphasise on reframing the existing rehabilitation and reformation programs in prison to address the problems of female offenders and also enhance the policy measures for successful reintegration.

The study puts forward a few suggestions given by police officers about enhancing the effectiveness of "3" R's. As per their opinion police officers should be given special training to handle female offenders and help them to successfully reintegrate back to society. Correctional programs in prison should satisfy the needs of female offenders and the preparations for their re-entry should begin along with their admission in prison. Non-Governmental Organizations have a significant role in the reintegration of female offenders. They can provide counselling, vocational training and job opportunities for released offenders. Police officers also emphasised that public should be aware about the rights of a released offender in society to avoid further stigmatisation and isolation from general public.

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Application of Appreciative Inquiry in Police

Puja Roy*

Abstract

People tend to focus more on problems, like what is going wrong. Hence, we attempt to fix the problem, instead of emphasizing what is going right. Appreciative interviewing (AI) is the approach by which the focal point is on the positive aspect; as in concentrating on what already works well, on people's strengths and, on positive experiences in the past. This is different from the problem-solving approach which is used for analyzing possible causes of problems and then finding respective solutions. AI has been applied in various contexts, including the police organizations. This review paper discusses the concept of AI and its application within police departments.

Key Terms

Appreciative interviewing, Concept, Police, Problem-solving

Introduction

The traditional method of solving problems is to focus on the aspects which are not working, and to analyse how they can be fixed. Another approach is to shift to a positive perspective, view the aspects that are functioning, and build on them. This is the concept behind Appreciative Inquiry (AI). Barrett, Cooperrider and Fry (2005) believes that the more attention an organization pays to identifying the best in its history, the more willing it is to enter innovative and fresh new thinking about the future. AI insists that organizations don't ignore themselves from their histories but, instead, carry the best aspects from their past into the future. In enables organizations to identify, keep and expand upon what they have done right.

According to Barge and Oliver (2003), there are two reasons, why problem solving approach, may not be the best solution for organizational change:

1) Problem-solving approaches rarely result in a new vision. Given that a problem is a "gap" between an existing and an ideal state of affairs, organizational members already possess a notion of what is ideal, and they do not search to expand their thinking, ideas, or visions; instead, they merely try to reduce the gap.

2) Problem-solving approaches increase levels of defensiveness among organizational members. They are based on the "blame game" and can rapidly create defensiveness because they must +attach blame, responsibility, and accountability to someone or something that has created the problem.

Author's Intro:

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Problem Focused	Appreciative Inquiry
Felt or identified "need" or problem	Appreciating the "best of what is"
Identifying root causes underlying problem	Imaging the "possible"
Use of quantitative performance data with limited attention to personal stories	Use of storytelling and personal narrative in addition to quantitative data
Developing solutions to problems	Determining what "should or could be" and pursuing this; spreading positive deviance to other topics/areas
Inclusive process involving individuals from all over practice or small group	Inclusive process involving individuals from all over the practice
An organization is a problem to be fixed	An organization is an asset to be appreciated and engaged

Note: Ludema, & Mohr, (2003)

There are studies where it's been seen that AI has been preferable. In a study comparing teams engaged in creative problem solving versus teams employing appreciative inquiry, Peelle (2006) found that individuals in the AI teams reported higher self-efficacy and a stronger sense of team cohesiveness than in the problem-solving teams.

Bushe (2012) mentioned that asking whether AI is better or problem solving, is a wrong question to be asked. AI is different because it focuses on generativity instead of problem-solving; those who use AI are just as concerned with problems as any other leader; they just come at them differently. Instead of trying to solve the problem, AI generates a collective agreement about what people want to do together and enough structure and energy to mobilize action in the service of those agreements.

AI has been successfully applied in a wide variety of organizational settings in the business, government, and non-profit sectors. AI applications have ranged from appreciative human resource practices, team development, diversity initiatives, and strategic planning, to the transformation of global corporate cultures and social change organizations (Hammond & Royal, 1998; Head, 2000; Whitney & Cooperrider, 1998). The diversity of these applications continue to increase as practitioners explore AI approaches in a wide variety of organizational settings. There are minimum four reasons for selecting AI for applications: (1) when high levels of participation and cooperation are required, (2) the change process needs to be accelerated, (3) the work requires innovation among diverse groups in a high stakes environment, and/or (4) multiple change initiatives need to be synthesized (Whitney & Cooperrider, 1998).

Concept of AI

To understand the basis of AI, it is useful to look at the meaning of the two words in context.

Appreciation means recognizing and valuing the contributions or attributes of things and people around us. Inquiry means explore and discovering, in the spirit of seeking to better understand, and being open to new possibilities.

AI is a term coined by Cooperrider and Srivastva (1987). It is a method of intervention that attempts to help individuals, groups, organizations, and communities create exciting and new generative images for themselves based on an affirmative understanding of their past and present operation (Bushe, 1998).

AI has been described as "the study and exploration of what gives life to human systems when they function at their best" (Whitney &Trosten-Bloom, 2003); it has also been defined as "the cooperative search for the best in people, their organizations, and the world around them" (Ludema, Whitney, Mohr & Griffin, 2003).

Cooperrider and others applied the theories of social constructionism and the power of image to organizational change and developed the following five core principles for the practice of Appreciative Inquiry (Cooperrider & Whitney, 1999):

· *The Constructivist Principle:* Related to the notion that multiple realities exist based on perceptions and shared understandings, this principle suggests that what is known about an organization and the organization's actual destiny is interwoven.

· The Simultaneity Principle: This principle asserts that the act of questioning by itself influences change, or even causes change and is thus an intervention. So, inquiry and change are not truly separate moments, but are simultaneous.

· *The Anticipatory Principle:*This principle states that our image of the future shapes the present human systems move in the direction of their visions for the future; the more positive and hopeful the image of the future, the more positive the present-day action.

· *The Poetic Principle:* This means that our choice of what we study determines what we discover. Thus, the character of an organization is created and influenced by the stories people tell each other about it.

· *The Positive Principle:* Positive questioning leads to positive change the more positive the question we ask in our work. the more long lasting and successful the change effort.

The AI summit, defined by Powley, Fry, Barrett and Bright (2004), is a large-system change initiative that uses dialogic democratic processes to inspire positive change. The duration of the summit is one to three days (depending on the size of the group).It is believed that AI can promote democratic organizing and develop strategic policy. The aim of the summit is to gather together for inquiring and discovering key success factors in respective organizations.

There are two important points to be remembered when using this approach (Cooperrider, Whitney, & Stavros, 2008*).*

· Inclusive Collaboration**:** To be successful, the process must involve the whole organization/ community or a representative cross-section. In this way all voices can be heard and everyone's contribution valued.

· What you study grows: One should exercise caution when designing interview questions. We are so

accustomed to focusing on the problems it that takes some practice to redirect our focus in the direction we want to move.

The Essential AI Process

AI's five underlying principles (constructionist, simultaneity, poetic, anticipatory, and positive) come to life through the design of the basic AI process, which is typically presented as a cycle of four phases known the "4-D Cycle" (Cooperrider, 1996). The phases are: (1) discovery; (2) dreaming; (3) designing; and (4) destiny or delivery.

AI practitioners have developed several variations and additions on the 4-D Cycle phases for application in a variety of settings. One addition which had always been considered a precursor to the 4D's is an initial *"definition"* phase in which three to five topics arecollaboratively selected to focus the inquiry. Key practitioner guidelines on each of these five phases are described below.

Step 1. "Define" the Problem

Hammond (1996) notes that "what we focus on becomes our reality." Thus, defining the topic(s) for an appreciative inquiry is perhaps the most important part of the process. Before we start analyzing a situation, we need to define what it is that we are looking at. Defining one's topic positively will help one to look at its positive aspects.

Step 2. "Discovery" Phase

In this step, we need to look for the best of what has happened in the past, and what is presently working well. The interview questions and process are designed to elicit and revitalize the positive affect associated with participants' stories, which in turn nurtures intrinsic motivation. The highlights and most "quotable quotes" from participants' stories are then shared in small and large groups. This helps in forming a collective database of organizational excellence that involves metaphor, imagery, and affect, with concrete examples.

Step 3. "Dream" Phase

In this phase, we should dream of "what might be". We should think about how we can use the positives identified in the Discovery phase, and reinforce them to build real strengths. During the dream phase the best of the past is amplified into collectively envisioned and desired futures. Working together in groups, participants review the images, metaphors, hopes, and dreams that were generated in the discovery phase and then, they are encouraged to elaborate their collective dreams. They can also use the medium of artwork, songs, etc, which can be enthusiastically shared with the entire group.

Step 4. "Design" Phase

Here, we start to drill down the types of systems, processes, and strategies that will enable the dream to be realized. During the design phase participants identify important aspects of organizational systems and structures that will be needed to support the realization of their collectively generated dreams. The facilitator may introduce a model of organizational structure for participants to work with, ormay support participants in generating their own model(s).Working again in groups, participants craft bold, affirmative possibility statements (or "provocative propositions" (PPs) that express their expansive dreams as already realized in the present tense. Language, imagery, and examples from the discovery and dream phases are fused into these design statements. Each statement is built around an aspect of the organizational structure. The finished PPs are then visually displayed and shared with the entire group which builds the basis for developing vision-guided action plans.

Step 5. "Deliver" Phase

Sometimes called the Destiny phase, the last of the Ds is the implementation phase and it requires a great deal of planning and preparation. The key to successful delivery is ensuring that the Dream (vision) is the focal point. While the various parts of the team will typically have their own processes to complete, the overall result is a raft of changes that occur simultaneously throughout the organization, that all serve to support and sustain the dream. Participants decide themselves to assign themselves into task groups according to the design statement(s) that they feel most strongly drawn to. They then work together to execute the design statements in action. Action plans may then be shared with the entire group. Thus, actions are then implemented over time in an iterative, appreciative learning journey.
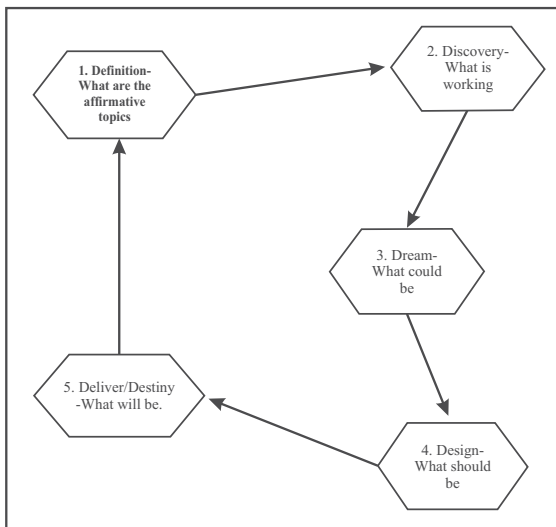
Fig 1: 5-D Appreciative Model

AI In Police

AI was developed in the field of organisational studies, but has subsequently been applied to other criminal justice settings.Various studies have found application of AI useful in police settings (Fry et al., 2004; Chrismas, 2012;

Liebling, Price, & Elliott, 1999; Coghlan, Preskill, &Tzavaras, 2003; Fry, Nisiewicz, & Vitucci, 2007; Skinns, Wooff, &Sprawson, 2017). Although AI interventions are on the rise, high amount of empirical research in police organizations is lacking (Van der Haar & Hosking, 2004).

* A three-hour conference with 280police officers, using AI was done (Voetmann & Gómez, 2004).The officers were paired up and were given some questions connected to their work:

  i.   What are the best experiences you have had as a police officer?

  ii. What made them possible? What did you do? What did the other people do? What were the circumstances?

  iii. What would have made these experiences even better?

  iv. What were the visible results of these experiences?

  v.   What do you value so much that it made you choose these experiences?

They were also asked to find the driving forces inside and outside themselves to create the preferred future, writing them over an arrow. Under the arrow, they wrote the opposing forces blocking the preferred future. For each opposing force, they brainstormed ways to overcome them or turn them to an advantage. The outcome of the conference was that people realized that there should be use of constructive, future oriented language, everybody should be involved in communication, sharing the stories of passion and of pride, and, there should be a spirit of cooperation.

If any police organization wishes to implement AI process, then the following must be conducted:

- The first step in AI is the selection of topics to be focused on. The topics are related to something that the organization is doing well that is critical to future success. The selection of topics proceeds from an overview of AI, mini-interviews between participants, the identification of themes arising from the mini-interviews, the sharing of stories and themes, and an overview of the criteria for topic selection (Whitney & Trosten-Bloom, 2003). The mini-interviews set the tone for the interviewing that takes place throughout Appreciative Inquiry, with Whitney and Trosten-Bloom (2003) describing appreciative interviews as an essential factor in successful Appreciative Inquiry within an organizational setting. Following the selection of the topics the Appreciative Inquiry or 5-D Cycle is embarked upon.

- Appreciative Inquiry organizes sequences of positive questions around constructive topics. Questions can be such as:

  i. Describe a time in your organization that you consider a highpoint experience, a time when you were most engaged and felt alive and vibrant.

  ii. Without being modest, what it is that you most value about yourself, your work and your organization?

  iii. What are the core factors that give life to your organization when it is at its best?

  iv. Imagine your organization ten years from now, when everything is just as you always wished it could be. What is different? What has stayed the same?

  v. How have you contributed to this future?

  vi. What can you continue doing to keep amplifying the good?

  vii. What can you begin to do to move the organization in the direction of our greatest desires?

  viii. What can you stop doing because it no longer serves or gets in the way?

  ix. What are some transitions you'll need to make to because you have existing responsibilities and constraints, and can't just drop everything immediately?

- Answers to questions like these and the stories they generate are shared throughout the organization or community resulting in new, more compelling images of the organization or community and its future. Thus, by inquiring into its positive core, police organizations can enhance their collective wisdom, build energy and resiliency for change and extends their capacity to achieve extraordinary results. Through constructive dialogue, trusted experience is shared, new possibilities imagined and new partnerships created to bring the desired future into being (Whitney &Cooperrider, 2011).

AI Used For Leadership Development and Use

Leadership development involves expanding an organization's capacity to generate leadership for its work (Van Velsor, 2009), and building and using strengths in relating interpersonally within the organization (Day, 2000). In other words, leader development is development at an individual level, and leadership development

involves interaction between the individual and the larger social and organizational environment. Appreciative Leadership is grounded in the field of (AI).

- To illustrate, in an AI process for leader development, the discovery stage may include questions such as:

  i.   When have you experienced great leadership at (your organization)?

  ii.   Think of a peak moment or high point in your experience of leading here or elsewhere.

  iii. What did you/others do to help that take place?

  iv.   What happened as a result of that leadership?

  v.   What was life-giving about that leadership?

  vi.   What gave life to that leadership?

  vii. What did you value most about that experience? Yourself?Others? The organization?

- The dream phase of AI is spent focusing on the possible future, or "what might be". In the case of leader development, this involves having participants imagine their greatest potential as a leader and envision that potential realized. There is use of the affirmative images described during the discovery phase for guiding them to envision how they might practice leadership in the future. Thus, they use their constructed narrative of what has worked well as a lens through which they may begin to reframe what is possible for the future.

- Examples of the questions during this phase include:

  i.   What are my highest hopes for leadership at (my organization)?

  ii.   What would I see happening at (my organization) if great leadership lived at all levels of this organization?

  iii. Who might I be as a leader?

  iv.   What would great leadership look like in me/us?

  v.   What would I/we be doing as a great leader(s)? What are those activities that we would be engaging in if we were great leaders?

  vi.   What would have to happen for this to occur?

  vii. How would we relate to each other (peers) in this organization?

  viii. How would we relate to our subordinates here?

  ix.   What would we be creating in the organization? Ourselves?Others?

- In the third phase of the AI process, observations, interpretations, and new meanings are communicated for the purpose of a clearer understanding of what each small group generated. At the close of this discussion participants are given the opportunity toidentify what was most important for them individually. They return to their small groups to generate a provocative proposition to present to the large group. They reflect the leader characteristics identified as essential to excellence and are created with attention to the following criteria:

  i.   Is it provocative—does it stretch, challenge, or interrupt?

ii.   Is it grounded—does it represent the ideal as a real possibility?

iii. Is it desired—if it could be actualized, would the organizationwant it; is it a preferred future?

iv.   Is it stated in affirmative and bold terms?

- In the destiny phase, participants commit to actions to help them move fromthe individually identified items that are central to creating peak leadership capacity to the manifestation of this potential in their work lives. This step isbest summarized by answering the question, 'who will do what by when andhow will we know?' Following this session participants are asked to make apublic commitment to what they will do to enact greater leader potential on the premise that a public commitment encourages follow-through beyond what an unspoken personal commitment might engender (Day, 2000).

The role of an appreciative leader is to be a catalyst of change and to look for and nurture the best in others (Whitney, Trosten-Bloom, & Rader, 2010; Cooperrider & Whitney, 2005). A leader can transform police organization by using the principles of AI in the following manner (Cooperrider & Whitney, 2005):

- The Constructivist Principle acknowledges that organizations are living, human constructions. To be a leader, according to this principle, is to know and understand an organization as a human construction, as ever changing, and is 'how' one knows an organization.

- The Principle of Simultaneity states that rather than one following the other, the questions we ask and the changes we make are not separate moments but are considered to be simultaneous. Leaders, can guide which questions are asked, what changes are made, and can then encourage movement toward a new future.

- The Poetic Principle says that all topics, like all human experience, are open to exploration and re-consideration. The Appreciative Leader can make the story, and its unfolding, explicit. Each participating author of the story in acknowledged and validated for contributing, wherever the story may go.

- The Anticipatory Principle mentions that what we imagine about the future and our conversations about that future guides present behaviour. An Appreciative Leader can encourage positive inquiry and an imagery which leads to new, even multiple, future realities.

- The final principle of AI, The Positive Principle, states that the more positive the central driving question, the more momentum for change is created and the more lasting the change experienced. Accordingly, leaders can thus monitor and manage this frame of reference.

Conclusion

Appreciative Inquiry is the study and exploration of what gives life to human systems when they function at their best. This approach to personal change and organization change is based on the assumption that questions and dialogue about strengths, successes, values, hopes, and dreams are themselves transformational (Whitney & Trosten-Bloom, 2010). What entrances so many people about AI, is the ability of a well-crafted appreciative question to build rapport and energy (Mantel &Ludema, 2000).

Police departments need to assess the values of the community and their own department to ensure that they align the values of both organizations; after this, the expectations can be understood and enforced by both the officers and the supervisors.

Focusing on past successes instead on failures allows the employees to feel proud: proud of themselves, proud to be working with other successful people, and proud of belonging to a company which has been able to achieve such successes. Exchanging stories on past successes reinforces the feeling of being part of a winning team and gives motivation to go forward. Another effect of inquiring into past successes is to open up wide horizons and multiple paths to the future.

Instead of being asked to step into the unknown, the employees start from something which they know well, and thus the fear of the unknown is somewhat lessened. Most importantly, the AI process naturally results in many positive emotions, such as pride, satisfaction, hope, amusement and gratitude. Such emotions can transform organizations because they broaden people's habitual modes of thinking, making them more flexible, empathic and creative, as well as enhancing their social connections and making for a better organizational climate (Fredrickson, 2003).

Isen's (2000) study stated that people experiencing positive feelings are more flexible, creative, integrative, open to information and efficient in their thinking. They have an increased preference for variety and accept a broader array of behavioral options. In addition, there are numerous, recent studies showing that the ratio of positive to negative talk is related to the quality of relationships, cohesion, decision-making, creativity and overall success of various social systems (Fredrickson & Losada, 2005). One explanation for this is Barbara

Fredrickson's broaden and build theory of positive emotions (Fredrickson, 2003). Her studies show that not only do positive emotions make people more resilient and able to cope with occasional adversity, they increase people's openness to ideas, creativity and capacity for creative action. Thus, the focus on the positive in AI can increase positive feelings, the positive talk ratio, and make generative thinking and acting more likely.

It is very important that there is involvement of leaders when introducing appreciative inquiry. A coalition of leaders can help guide the introduction and continued use of the appreciative inquiry. Appreciative leadership supports innovation throughout the organization by rejecting problem-based and deficit models in favor of freeing staff to generate new and innovative solutions.

In conclusion, Appreciative Leadership, and Appreciative Inquiry as a process, holds out hope by identifying the strengths and positive nature of the organization and its staff and by introducing democratic leadership and processes that work to flatten the hierarchical structure through full participation of its members.

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Integrating Human and Social Media Intelligence for better National Security

Vinay Kaura[*]

Abstract

With increasing use of the Internet, the volume, value and accessibility of Open Source Intelligence (OSINT) has revolutionised the Intelligence community. With Internet becoming a critical battleground for both law enforcers and law breakers, information scattered on various social media platforms can enhance the ability of law enforcement agencies to rapidly gather and analyze open source data during investigations as well as to combat crimes. However, despite the growing significance of Social Media Intelligence (SOCMINT), the importance of Human Intelligence (HUMINT) has not diminished. When dealing with SOCMINT, the major concern is not about the availability of information, but the identification of accurate information. The article discusses the growing significance of SOCMINT for law enforcement and intelligence agencies, while arguing the integration of HUMINIT and SOCMINT for better national security.

Keywords

Law Enforcement, Social Media, Intelligence, Cyber, SOCMINT, HUMINT, National Security

Introduction

India's national security faces multiple threats from organized crime, human and drug trafficking, terrorism, insurgency, political violence, religious radicalization and many persistent sources of instability. This threat matrix is complicated by the fact that the law enforcement and intelligence agencies experience varying levels of separation that has traditionally resulted in each agency focusing on differing issues. Responding to the existing and emerging threats, challenges and risks requires vigorous enhancement in the government's early warning and situational-awareness capabilities.

Intelligence Dimension

The technological transformations of the present era are "enabling more and more people, with more and more home computers, modems, cellular phones, cable systems, and Internet connections to reach farther and farther, into more and more countries, faster and faster, deeper and deeper, cheaper and cheaper than ever before in history" (Friedman 1999). This has far-reaching repercussions as the Internet-driven communication channels allow national boundaries to be crossed easily without physically crossing them. The borderless nature of the cybercrime as well as the transnational dimensions of terrorism, human and drug

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trafficking, smuggling of firearms and money laundering usually tend to facilitate terrorists and criminals in planning their crimes from jurisdictions across the world, making law enforcement particularly challenging.

The increasing use of cyber technology as a medium for illegal and anti-national activities means that government agencies need to change the manner in which they address it. One of the most preferred ways to address varied challenges is Intelligence which has become one of the most influential aspects of national security. Intelligence is a means to an end which is security. Hence, the intelligence field is about maximizing security by contributing to the reduction of uncertainty (Gill & Phythian 2006; Quiggin 2007).

Intelligence has often been viewed as an internationally-focused activity that occurs largely outside India's borders. In this conceptualization, Intelligence agencies are charged with gathering information and learning about threats to the country, not prosecuting the perpetrators. In contrast, law enforcement is done domestically and designed to help prevent criminal activity. The law enforcement agencies make it possible to identify and apprehend those who break the law. However, the transnational nature of contemporary security threats calls into question the fundamental assumptions that have so far underpinned Indian intelligence and law enforcement activities. In recent years, the term intelligence has also been integrated into law enforcement and public safety agencies as part of intelligence-led policing (James 2013; Baker 2011; Ratcliffe 2008).The emphasis is also on the targeting of individuals or organizations using covert methods. Attempts to control drug trafficking and weapons smuggling into the country have long had associated intelligence efforts. Similarly, law enforcement activities centred on countering money-laundering involve considerable financial intelligence architecture.

Thus, the transition to intelligence-led policing has meant that even 'conventional' law enforcement activities have strong intelligence components.

The law enforcement and intelligence agencies are devoting a great deal of time and energy to sharpening their capabilities on early warning, situational awareness, threat assessment and risk analysis. There are various methods to collect information which gets converted into intelligence. However, when accurate information is not available through traditional methods, then a wide range of specialized techniques unique to the intelligence field are called into play (Clark 2013).

Social Media Intelligence

The importance of information analysis, data processing and intelligence has substantially increased for the government decision-makers, particularly after the rise in transnational organized criminal networks, global terrorism and cyber-sabotage.

The information which is scattered everywhere – newspapers, official data, television and radio broadcasts, online blogs, social media platforms – contains Open Source Intelligence (OSINT). We have decisively moved from a world of data shortage to data abundance. And the rapid explosion of publicly available information is fast changing the intelligence system around the world. Various social media platforms provide the means by which the Internet is used to create and to share information about peoples' thoughts, movements, and transactions. For the first time in human history, entire populations have been thrown into direct contact with each other. All of these interactions leave a digital trace, making social media as the largest body of information about contemporary society.

The primary responsibility of law enforcement agencies includes maintenance of law and order,

protection of citizens and preventing and investigating crimes. As the scale, scope and complexity of the threats from criminals, whose operational methods are getting increasingly sophisticated, is gradually increasing, the OSINT can critically enhance capabilities of these agencies to perform their tasks. This is because the ability to collect and analyze open source data can be a great help during investigations and used for framing and implementing policies to battle all kinds of crime (Staniforth 2016: 21-32)The interaction among users based on social media creates virtual communities providing an excellent source of information for intelligence agencies. As revealed by the Union Home Minister, Rajnath Singh, during a conference in September 2018 that in case of lack of information about the criminals in the Crime and Criminal Tracking Network System (CCTNS), India "should have such software that can dig into the social media network and collate information about such elements" (Economic Times 2018). It is therefore essential for all practitioners and policy-makers to understand how the potential of OSINT can be increased.

In intelligence terminology, OSINT has always remained separated from the spy craft of coaxing and interrogation, which is known as HUMINT, and the intercept of confidential communications, which is known as SIGINT (Singer & Brooking 2018). However, the sheer amount of information makes it very difficult to collect and analyze OSINT that could actually translate into actionable intelligence. In order to overcome this challenge, the law enforcement and intelligence agencies around the world have begun to use artificial intelligence (AI) and other means to comb through the vastness of the online web, tracking unfolding events and predicting how they are going to evolve (Adelstein 2018).

Social media interactions have also resulted in erosion of the distinction between online and offline criminal worlds. Therefore, intelligence and security agencies are seeking to acquire Social Media intelligence (SOCMINT) capabilities for a variety of purposes. SOCMINT is a sub-category of OSINT. "Social media should be considered a subset of OSINT. Although these networks have been in use for a decade or more, they first achieved significant notice as an intelligence source during the Arab Spring revolt against President Hosni Mubarak of Egypt in February 2011. Antigovernment demonstrators in Tahrir Square on Cairo used text messaging and Twitter as a means of communicating. Apparent leaders of the demonstrators were identified by the number of Twitter followers" (Lowenthal 2016).

One of the most important aspects of SOCMINT is the value it can add to police operations in the ability to obtain timely and actionable intelligence. Moreover, in most of the recent counter-intelligence operations in India, SOCMINT and Technical Intelligence (TECHINT) seems to have played a leading role in busting the terror modules. For instance, an Indian soldier in a tank regiment in Jaisalmer was arrested by Rajasthan Police in January 2019 after he was found to be honey trapped by Pakistan-based ISI operatives on social media for passing critical information. After this revelation, the Army is reportedly tracking multiple accounts of officers and soldiers to probe if the Pakistani spy account was in touch with them (ANI 2019). Similarly, the Anti-Terrorist Squad (ATS) of Uttar Pradesh Police arrested a BSF soldier from Noida in September 2018 on charge of sharing vital information with Pakistan ISI agents. He was in regular contact with a phone number registered in Pakistan, and the subsequent analysis of his WhatsApp chat and Facebook account divulged several cyber evidences vital for investigation (Press Trust of India 2018).

More often than not, telephonic and email interception as well as recovery of laptops,

mobile phones, hard discs and pen drives have provided vital clues to intelligence agencies to unearth the identities, motivations, plans and intentions of extremist, terrorist and militant organisations and foreign hostile agencies working against India's interests (Chauhan 2017; Ahuja 2018).

Not surprisingly, the intelligence agencies are increasingly relying on SOCMINT and TECHINT. The increasing use of technology in the form of closed circuit television (CCTV) networks, sophisticated surveillance systems, high-altitude imagery intelligence, and other electronic intelligence devices are now considered as vital tools available to the police for providing actionable intelligence. The law enforcement agencies are also increasingly using data mining techniques to anticipate, prevent and respond to future crimes. The National Intelligence Grid (NATGRID) has been envisioned as a unified database that would provide India's security agencies with real-time access to about two dozen databases to track terror activities. It has acquired some of the world's most advanced data-mining software. Some of the features of NATGRID are being replicated by the CCTNS. In other words, the electronic revolution has brought new techniques of intelligence collection.

This obviously raises a question: Has technology rendered Human Intelligence (HUMINT) obsolete? This question assumes greater significance at a time when no aspect of intelligence conduct remains untouched by the weightier impact of technological advancements, particularly in the cyberspace. Before answering this question, it is important to understand the element of HUMINT, which is what the term 'intelligence' is most likely to bring to mind.

Explanation of important terms

Actionable Intelligence	Information that will prompt the law enforcement and security agencies to act upon in order to mitigate an impending threat. 'Actionable' is sometimes also referred to as 'tactical'.
Counter-Terrorism	Counter-terrorism (CT) refers to a range of activities that are performed to enable the state to respond to threats posed by terrorists. Response to terrorism has to take into account both the dynamics of the policy-making process as well as the external pressures that may impact the nature of anti-terrorist policies. CT involves collecting intelligence on terrorist groups which can be used to disrupt their network and also to prevent future attacks. Much of this activity is conducted covertly by the national security agencies, such as Intelligence Bureau (IB) and National Investigation Agency (NIA) in India, as well as Anti-Terrorism Squads (ATS) of State police in which they make use of a wide range of human, cyber and electronic surveillance methods.
Criminal Intelligence	Data which is relevant to the identification of and the criminal activity engaged in by an individual or organization. Many criminal activities including smuggling, trafficking in humans,

	drugs and weapons, extortion, bribery and corruption often involve some degree of coordination and networking among a large number of people.
Data Mining	The science of extracting useful information from large databases as well as the application of database technology to uncover hidden patterns in data and to infer rules that allow for the prediction of future patterns. The law enforcement agencies are using data mining and predictive analytics for analysing data from different sources and using the results to anticipate, prevent and respond to future crimes. Data mining does not identify specific individuals; it just predicts times and locations where crimes are likely to occur.
Digital Footprint	A digital footprint is a trail of data which is created while using the Internet. This includes the websites visited, emails sent, information searched on search engines as well as engagements on social media platforms.
Evaluation Of Intelligence	Appraisal of information or intelligence collected in terms of credibility, reliability and accuracy is termed as evaluation of Intelligence. This appraisal is done at each stage of the intelligence cycle, depending upon the different contexts of that stage.
Intelligence-led Policing	Intelligence-led Policing (ILP) is "a collaborative law enforcement approach combining problem-solving policing, information sharing, and police accountability, with enhanced intelligence operations" (U.S. Department of Justice, 2009: 4). Aimed at guiding policing activities toward high-frequency offenders or locations, an important aspect of ILP is that it encourages mutual collaboration among local police, other local law enforcement agencies and the local community. ILP can help police to identify, prioritize and address issues of public safety more effectively.
Law Enforcement	The organised upholding of the law, including the detection and prevention of crime, by national and local police, customs, border and other state agencies.
Open-source Intelligence (OSINT)	Information of potential intelligence value that is publicly available to the people such as from television, radio, newspapers and magazines, and the Internet. In addition to that, any publicly available information and other unclassified information with limited public distribution or access that

	can be used without compromising national security or intelligence sources.
Social Media	Social media is the collective of online communications channels dedicated to interaction, content-sharing and cooperation. Some important examples of social media platforms include Facebook, Twitter, WhatsApp, Google +, Linkedin, Reddit etc. that offer different ways such as instant messaging, e-mailing, real-time video or voice chatting for users to communicate with each other. Organised crime syndicates, illegal private groups and terrorist organisations use social media sites for communication, recruitment and gathering information.
Sources of Intelligence	The means or ways to observe or convey information of situations and events. There are many primary, secondary and tertiary source types. The primary source types are Human Intelligence (HUMINT), Imagery Intelligence (IMINT), Open Source Intelligence (OSINT), Signals Intelligence (SIGINT) and Technical Intelligence (TECHINT), and now Social Media Intelligence (SOCMINT).
Tacit Knowledge	Intangible or intuitive knowledge that is undocumented and maintained in the human mind. Typically characterized by intangible factors such as perception, belief, intuition, and gut feeling, tacit knowledge forms an integral part of the HUMINT.

Significance of HUMINT

HUMINT involves identifying and recruiting a person who has access to and is willing to pass on important information to an intelligence agency. Howsoever many brilliant new methods of intelligence collection are invented, good human agents or sources are still necessary to know what is going inside the minds of the leaders of criminal syndicates, extremist outfits and terror groups as well as the state of morale in the hostile outfit. TECHINT can tell us what the adversary is doing, but it cannot always tell us its real intentions (Newbery 2015: 67). And the understanding of how SOCMINT can be reliably obtained and used still remains incomplete and immature ((Omand, Miller & Bartlett 2014: 24-43). Here comes the role of HUMINT which is most likely to remain the crux of intelligence collection for the foreseeable future.

As Robert D. Steele has passionately argued that HUMINT will remain "the heart, soul, and brain of 21st century intelligence," since "it will be HUMINT, not some arcane collection of technologies, that discovers, discriminates, distills, and delivers education, intelligence, and research – whether from direct human observation or with support from technologies... Machines are programmed and perform at the

lowest common denominator of the sum of their human contributors. Humans, in contrast – properly led, properly trained, properly equipped – are uniquely capable of 'on the fly' innovation, catalytic insights, nuanced expression, compassionate listening, and a myriad of other tradecraft as well as socio-cultural skills that no machine will ever master" (Steele 2010: 53)

There is however no point in comparing the importance of HUMINT with TECHINT as both are essential elements in any intelligence task. If aerial photography can cover vast area in a matter of few seconds, a human source cannot possibly cover in a lifetime. However, there is no denying the fact that HUNINT will be required to interpret adversary's intentions or steal inimical plans.

Having said this, it is time to adapt traditional methods of collecting HUMINT to the imperatives of the cyber world. As David V. Gioe, a faculty at the United States Military Academy and a former CIA case officer, explains that remarkable innovations in the cyber domain has both enabled and hampered the collection of intelligence through human sources. Although some aspects of contemporary HUMINT techniques are already different from what they used to be before the onset of the cyber era, the personal interaction is still the mainstay of HUMINT, and interaction via Internet cannot completely substitute the personal bonds between an intelligence officer and his source or agent (Gioe 2017: 213-28).

Given the enduring appeal of interpersonal relationship, how much HUMINT can actually be accomplished in cyberspace is an important question to consider. Gioe has convincingly argued that intelligence operatives need to embrace the potential of technologically empowered HUMINT operations while simultaneously recognizing the substantial challenges that lie ahead. With the huge spurt in information available online and the corresponding prominence in publicly available intelligence, it is often argued that OSINT collection coupled with analysis of 'big data' will soon overcome the problems associated with clandestine sources. Though there is no doubt that SOCMINT is a valuable tool, it would be wrong to believe that it can replace traditional HUMINT when it comes to collection of vital information.

HUMINT's Challenges

Digital footprints can very well enable the intelligence agencies to track down a suspected criminal or terrorist, but it may also leave its own intelligence operatives susceptible to enemy penetration. Gioe explains that for any intelligence operative, maintaining his cover has always been a key requirement for success. Intelligence operatives are also required to travel for a variety of reasons, and the key among them is meeting with their existing and potential sources. Doing so in a disguised manner enhances the security of their operations. However, digital technology poses a direct threat to this traditional intelligence practice (Gioe 2017: 213-28).

It has become extremely challenging to dodge the digital tracking. With the prevalence of social media, SOCMINT is a powerful tool for intelligence collection. But it also poses multiple problems for counterintelligence personnel. More than two billion people – a quarter of the world's population – now have Facebook accounts (BBC News 2017), besides having their professional profiles in many social networking sites. How can the intelligence operatives mange their digital footprints while cultivating or running sources?

Before the advent and spread of social media, the basic understanding of the tradecraft could have helped the intelligence officer to defend his 'cover'. For instance, he could pose as a researcher or a journalist or a businessman for

collection of intelligence. But things have changed substantially. The ostensible researcher or journalist or businessman will now need digital trappings of his research or journalistic or business work. Even if his cover were viewed as genuine, how could he explain having no personal social media presence? It has become increasingly easy to get identified in the cyberspace, thanks to the digitally connected world. The increasing scrutiny of personal profiles raises questions about the efficacy and defensibility of such intelligence tradecraft in the present times.

Another challenge is thrown by the need to have personal connection between the intelligence operative and his source. Even if cyberspace has considerably reduced the distance between the intelligence operatives and their sources, they still cannot entirely avoid meeting in person. Only in a personal meeting, can an intelligence operative make a detailed assessment of the usefulness of his source. A personal meeting can help the intelligence operative to apply human intuition or tacit knowledge which is so important in the world of intelligence. A great deal of human communication is made possible through non-verbal means. A part of HUMINT depends upon correct interpretation of unspoken communication such as the body language and eye contact, which is made possible during a personal meeting. Besides, any source will need direction and tasking, and this vital function cannot be achieved entirely on cyber platforms, however advanced they may have become.

If the intelligence operative and his source are connected only digitally, it would not be easy for the former to discern what the latter is thinking. Money, ego, revenge or some combination of these factors motivate a human being to become a source for the intelligence agency. As Scott Uehlinger explains, "When it comes to HUMINT, however, we find that the same motivations that drove people to espionage

centuries ago still hold. Although these motivations are multi-faceted and complex, they can be summarized as MICER: money, ideology, compromise, ego, and revenge" (Uehlinger 2018). But in all cases, potential sources must be reassured that the information they reveal will not endanger them in case of an insider leak. Therefore, running sources entirely on digital platforms may not be the best way to guide and maintain a high-value source.

The challenges of hacking and insider leaks have the potential to compromise or derail the intelligence operations. Any personnel with sensitive operational information is exposed to potentially compromising contacts in the cyber world. Due to massive breaches of government as well as private databases which hold personal information, a social media presence which is either negligible or minimum should be considered best practice for personnel in possession of vital information since hackers, criminal syndicates, terrorist outfits or hostile agencies would try their best to make full use of all publicly available information to build a picture of their potential target to access sensitive information. Adversaries, both individuals and agencies, are always on the lookout for social media presence of their targets that may provide clues for a motivating factor for recruitment. And knowledge of potential motivations often leads to potential vulnerabilities.

The arrest of an engineer working with BrahMos Aerospace on charges of spying in October 2018 highlighted the issue of external intelligence agencies using good-looking females to trap Indian officers through social media. In February 2018, Delhi police had arrested a senior Indian air force officer for allegedly sharing classified information with two women. A probe revealed that the officer was honey-trapped online by Pakistan's ISI through two Facebook accounts and on WhatsApp (Manral 2018). In many cases,

friend requests are sent to officers on Facebook and contact numbers are exchanged leading to beginning of chats through smartphones of Chinese make. The next step is blackmailing for classified information. More than a dozen serving and retired security personnel had been arrested for allegedly spying for the ISI or being part of its espionage racket over the past four years (Siddiqui 2018). Clearly, there are no easy solutions, but any solution will involve all the stakeholders including the most important one – the Intelligence Community.

Recommendation

The foundational purpose of intelligence is to improve the quality of decision-making by reducing the element of ignorance and uncertainty. With its ever-increasing use, the analysis of SOCMINT is capable of decisively contributing to public safety and internal security by improving the information available to those who have to make difficult decisions. Whilst SOCMINT may have emerged as an intelligence practice, it is yet to emerge as a distinctive intelligence tradecraft. The emergence of a coherent body of learning and experience on the use of SOCMINT by security agencies is vital.

For instance, SOCMINT can provide vital information about the links, motivations and intentions of Indians who are getting attracted to violent and extremist ideologies, but HUMINT still retains the key to solving this puzzle. At the same time, it needs to be acknowledged that HUMINT has become an extremely complex terrain in a world characterized by digital communications. The physical and digital battlefields are drifting closer.

For law enforcement and intelligence agencies, the ubiquity of cyberspace and proliferation of social media tools present both counter-intelligence challenges and intelligence opportunities. Since it is not possible to replace HUMINT with other methods of information

gathering, it is imperative for law enforcement and security agencies to develop a new intelligence tradecraft. We are reminded that "those disciplines best equipped to understand and explain human behaviour – the social and behavioural sciences, political science, psephology, anthropology and social psychology – have not kept pace in relating this insight to the big-data approaches necessary to understand social media. Conversely, these very same big-data approaches that form the backbone of current SOCMINT capabilities have not used sociology to employ the measurements and statistics they use to the task of meaningfully interpreting human behaviour" (Omand, Bartlett & Miller : 816) Researchers have been arguing for SOCMINT and HUMINT to be fused, and this synthesis may give rise to a new intelligence system – Digital or Cyber HUMINT (Lombardi, Rosenblum & Burato 2016).

Conclusion

In today's increasingly interconnected and interdependent digitized world, the growing interconnectivity of information sources has brought out both positive and negative consequences. The collection, collation and analysis of available information to enhance internal security and preserve public order should be treated as its positive aspect. But the growing interconnectivity is also generating new avenues and methods for crime, violence and conflict, which are inducing certain individuals and groups to engage in hostile activities and to undermine public order.

Intelligence is the foremost requirement for success in any conflict situation. OSINT in general and SOCMINT in particular are being used as one of the key intelligence sources for national security and its importance is only rising. But SOCMINT cannot be the only source that law enforcement agencies depend upon. It can be a powerful tool when it provides additional intelligence to the existing available intelligence

acquired by traditional methods. A promising approach to ensuring efficient solutions in relation to countering terrorism, cybercrime, crisis management and public order is innovative collaborations between various stakeholders.

The diverse nature of cyber activities including the use of social media requires a highly professional and diverse intelligence workforce to deal with challenges associated with them. The government agencies have many capable intelligence professionals, but the academic community has the unique asset of individuals who are innovative and independent thinkers. They often look at security related issues from a perspective completely different from the perspective of those formally responsible for national security. If the two sets of knowledge bases are judiciously integrated, it can lead to better outcomes.

India's intelligence operatives need to be equipped with sufficient knowledge of social psychology and political science along with advanced understanding of the information security tools. In other words, intelligence tradecraft must integrate human and cyber factors in a way that leads to successful intelligence operations, safeguarding the national interests.

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Occupational and Organisational Stress on Police: A Discussion on Recent Studies

Dr. Kamal Bikash Majumdar*

Abstract

The article discusses about the stress and types and it further states about its impact on health of police personnel. Several research and studies have been quoted and comparative charts have been used to substantiate that stress affects health of the Police personnel.

Keywords

Stress, Trauma, Depression, Violence, Anxiety, Substance Use Disorders, Post Traumatic Stress Disorder, Disparities

Introduction

Police work can have negative effects on officers' physical health, mental health and work/'life issues, such as work/family conflict and problems in relationships. for law enforcement agencies, officer stress manifests as increased absenteeism, turnover, and declines in performance, including slower reaction time, poorer decision-making ability, and increases in complaints, policy violations, and misconduct allegations. Over time, stress can impact officers' ability to protect the communities they serve, and can lead to an increased tension between officers and community members.

Types

Occupational stress may be divided into two different types of stresses in police personnel, i.e. operational and organisational stress. **Operational stress** means the stress associated with doing the job and **organisational stress** is the stress associated with the organisational culture within which the job is performed in both male and female police officers. In a recent study published in 2017, both operational and organisational stress were significant among the police officers in India. Organisational stress was experienced at moderate level by 68% and at high level by 14%. Operational stress scores were in the moderate range of 67% and in high range of 16.5%. The younger age group (21-35 years) and lower level rank police personnel had higher stress. Stress was higher among female police personnel compared to males. While 23% of them had been diagnosed with physical illnesses, a significant four per cent of them with mental illness, and 29% of them reported substance abouse. The results point to the high level of stress among Indian police personnel and the need for urgent interventions from the government to address the occupational stress.

Author's Intro:

*   Tripura Police Service

Causes:

Causes of Operational Stress with Percentage of Subjects Reporting them

Sl. No.	Operational Stressors	Percentages of respondents who reported stress
1.	Over-time demands	72
2.	Note enough time available to spend with friends and family	70
3.	Fatigue	70
4.	Occupation related health issues	68
5.	Limitations to social life	66
6.	Working alone at night	65
7.	The risk of being injured on the job	64
8.	Finding time to stay in good physical condition	64
9.	Feeling like always on the job	64
10.	Work related activities on days	62
11.	Lack of understanding from family and friends about work	60
12.	Eating unhealthy at work	59
13.	Negative comments from the publice	56
14.	Paperwork	56
15.	Making friends outside the job	56
16.	Shift in work	56
17.	Friends/family feel the effects of the stigma associated with job	55
18.	Traumatic events	53
19.	Managing social life outside of work	52
20.	Upholding a "higher image" in public	48

Causes of Organisational Stress with Percentage of Subjects Reporting them

Sl. No.	Operational Stressors	Percentages of respondents who reported stress
1.	Staff shortagves	78
2.	Bureaucratic red type	68
3.	Perceived pressure to volunteer free time	65
4.	Unequal sharing of work responsibilities	65
5.	Lack of resources	64
6	.Dealing with the court system	63
7.	Lack of training on new equipment	63
8.	Constant changes in policy/legislation	62
9.	Constant changes in policy/legislation	62
10.	Inadequate equipment	60
11.	Dealing with supervisors	60
12.	Inconsistent leadership style	61
13.	Excessive administrative duties	68
14.	Leaders over-emphasise the negatives	57
15.	The feeling that different rules apply to different people (e.g. favouritism)	52
16.	Feeling like you always have to prove yourself to the organisation	48
17.	Internal investigations	48
18.	Too much computer work	44
19.	If you are sick or injured your co-workers seem to look down on you	37
20.	Dealing with co-workers	29

Impact of Stress

The direct implications of the symptoms of stress include **digestive orders, cardiovascular diseases, alcoholism, domestic vilence, post-traumatic stress disorder, depression and suicide.** While some police officers start their careers in excellent physical health, some retire early or even die from job-related stress disorders if the cuculative impact of stress exacts its toll.

Deviant behaviour

Lack of rest and inability to spend time with their families was the prime reason for the deviant behaviour of most policemen, the Madras High Court ruled in July 2018 and insisted on offering weekly offs to them too.

Some of the most commonly diagnosed mental health disorders among police officers today:

1.   Post-Traumatic Stress Disorder

Due to acute trauma (e.g., being the victim of an attack or assault, experiencing any life-threatening situation as a witness, etc.) or repeated exposure to traumatic events and ongoing threats, post-traumatic stress disorder (PTSD) can develop. As many as 20% of police officers are at risk of developing PTSD, a disorder known to contribute to divorce, substance use disorders, suicide among law enforcement officers, and more.

2.   Trauma-Related Disorders

Issues of anxiety, depression, sleep disorders, and more can all be indications of a trauma, and so can obesity, respiratory problems, and chronic medical conditions. How someone will process trauma will vary and depend on their past experiences, underlying mental health issues, and the coping skills they have at hand to deal with the emotions they feel. Every officer is different, and while post-traumatic stress disorder may not always develop, other signs of trauma are commonly diagnosed among law enforcement officers in crisis.

3.   Substance Use Disorders

Alone or in combination with PTSD or other trauma-related disorders, substance use disorders often strike law enforcement. Using drugs or alcohol to unwind after a hard shift becomes the norm, drinking or getting high to escape the mental health symptoms caused by trauma exposure on the job, and/or attempting to "self-medicate" a mental health disorder and alter mood by using substance–all these are often reported by law enforcement officers in recovery as they seek to understand the why and how of their addictions.

Though many view substance use, especially alcohol use, as a normal way to manage stress, few expect it to grow into a problem of its own, and they don't anticipate the toll it will take on their ability to do their job.

Research Outcomes

A 5-year long scientific study on 'Buffalo Cardio-Metabolic Occupational Police Stress (BCOPS)' was conducted by the **Buffalo Police Department, and published in the special edition of *International Journal of Emergency Mental Health,* Buffalo University, New York** in 2012. Funded by National Institutes of Health, the study was one of the first police population-based studies to test the association between the stress of being a police officer and psychological and health outcomes. The study reveals links between the daily stress factors of police work and **insomnia, suicide, obesity, cancer and various general health disparities** which police often suffer compared with the general population.

The study was initiated because of the assumption that the daily stress factors that

police officers endure during their work, such as danger, high demands and exposure to human misery and death, are contributing factors to a higher risk of cardiovascular disease and other chronic health outcomes.

Almost half, i.e. 46.9% of the officers who particiapted in the BCOPS study worked a non-day shift in comparison to only 9% of U.S. workers. One of the findings revealed that shift work is a contributing factor to an increase in metabolic syndrome, a combination of symptoms, such as abdominal obesity, hypertension, insulin resistance, stroke and type 2 diabetes. As a group, officers who work nights have a higher risk of metabolic syndrome than those who work day shifts.

The study involved 464 police officers and the findings revealed that compared with 32% of the genral population, 40% of police offers were obese and that over 85% suffered from metabolic syndrome comapred with 18.7% of the general population. Furthermore, amongst those with the highest level of self-reproted stress, female officers were 4-times more likely to experience a poor sleep. In addition, officers had a hgiher risk of developing Hodgkin Lymphoma and brain cancer after 30 years of service. The team also found that the suicide rate amongst working officers was over 8-times high compare with retired police officers or those who left the police force.

The results of the BCOPS show that police work alone can expose officers to adverse health outcome risks. Usually, health disparities are defined by socio-economic and ethnic factors, but in this case, there is health disparity caused by an occupation.

Paper on Operational & Operational Stressors upon the respondents was discussed earlier.

Hindrances to counselling

Police personnel who admit suffering from a chronic disease or health problem fear the risk of losing their financial status, professional reputation or both. If one has a heart disease, he may not be allowed to go back on the street. That's a real threat. If he goes for mental health counselling, he might not be considered for promotions and may be shamed by peers and superiors. In some cases, guns are taken away, so there is a real fear of going for help.

The Way out

Entitlement of Holidays

The Madras High Court while hearing in a plea, ruled that policemen should be given a day's holiday in a week so that they can spend time with their families, likewise why shouldn't the police personnel who don't get a weekly off? It will help them rejuvenate themselves and relieve them from stress," said Justice N Kirubakaran when a plea seeking abolition of orderly system in the police force was filed in July 2018.

Stress Reduction Programs for Police Officers

Help for officers dealing with on-the-job stress could ultimately improve relationships between law enforcement agencies and their communities. Attempts to identify ways of reducing officer stress have been made sporadically, and some interventions have shown positive effects as well. Examples of such strategies include:

- Self-regulation skills training to reduce negative emotions, improve sleep, and increase the use of effective coping strategies.

- Relaxation training to reduce stress and increase sleep quality.

- Resilience training to reduce the impact of operational stress on health and behavioural outcomes.

Planning to design Stress relieving mechanisms will play a decisive role in mitigating stress on uniformed personnel.

Scope of improvements in future research

- Utilize a Total Worker Health approach, which integrates occupational safety and health protection with health promotion to prevent worker injury and illness and advance worker health and well-being.

- Use experimental designs to better understand the relationships between police work and health, and officer well-being and agency outcomes.

- Examine health and wellness interventions developed outside of U.S. law enforcement. This includes policing research conducted in other countries, as well as occupational stress interventions conducted in the United States among different occupational groups.

- Develop "wise", scalable interventions. Hone in on the precise psychological processes that lead to behavior change to allow for brief but effective intervention programs.

- Improve measurement of key indicators. Use best practices on how information will be gathered, stored, and analyzed. Collect objective health, wellness and performance data when possible,

and use outside sources of information (such as data from community members, supervisors, peers, or spouses) when appropriate.

- Develop tailored interventions that account for the particular stressors officers experience in different regions, agencies, and roles. In addition, consider how officer characteristics, such as officer race/ethnicity, age and gender, may impact the types of stressors experienced.

Making these changes in research and practice will not be easy, but it is a necessary investment. The law enforcement profession deserves tailored, evidence-based approaches that incorporate police input on their needs and preferences. Managing officer stress facilitates better decision-making, fairer treatment and improved relationships between officers and the community members they serve.

Police Recruits

Police recruits needs to receive inoculation training against stress. If they are told that the first time they see a dead boy or an abused child that it is normal to have feelings of stress, you will be better able to deal with them; exposure to this type of training inoculates them so that when it does happen, they will be better prepared. There is a need to chagne training in police academies, at least to the extent that allow aspiring officers to understand the symptoms of stress and how to get them treated.

Empathy of seniors

Middle and upper management in police departments need to be adequately oriented in how to accept officers who ask for help and how to make sure that officers are not afraid to ask for that help. They should be trained to deal

with subordinates suffering from various degree of stress.

Mandatory Annual Yoga/Stress relieving programs & Diet

Annual yoga/stress relieving programs should be conducted every year for policemen in the field. Mandatory mental check-ups and orientation regarding regimen to be followed should be done.

De-Addiction Programs

In the US, if substance use disorders and/or co-occurring disorders of trauma or mood disorders are impeding the ability to function, First Responder Lifeline Programs ran by the American Addiction Centers provide a unique option for law enforcement in crisis due to addiction and their families with:

- Therapists who are trained to work with first responders

- Treatement plans designed specifically to meet the needs of first responders

- A range of traditional, alternative, and holistic therapies

- Trauma evaluation and assessment to identify all co-occurring mental health disorders

- Reintegration assistance

If mental health issues are triggering the urge to drink or use drugs and causing other issues in your life, the First Responder Lifeline Program can be reached with circulated helpline numbers.

Conclusion

Police personnel undergo significant occupational stress. Stress is more among younger age groups, lower level rank police personnel, and in females. Physical and mental health issues are higher among them, which needs immediate attention from the concerned authorieites. Structural chagnes are essential and gender specific stress reduction programmes are also recommended.

Despite the promising strategies discussed above, most research on intervention studies to reduce officer stress shows no, or very small, effects. This relative lack of success is a major public health issue; prolonged exposure to stress and trauma can have serious, and even life-threatening, consequences. It's been estiamted that at any given time, approximately 30 percent of police officers experience clinically significant post-traumatic stress disorder (PTSD) symptoms or meet the full diagnostic criteria for PTSD. There are instances where more officers died of suicide than in the line of duty.

Major limitations of existing research

To address the problems, it is required to acknowledge the major limitations of existing research, viz:

- Existing research on the link between officer health and police performance fails to fully consider the complex nature of police performance

- Little research has explored how agency policies affect individual officer health.

Research has often taken a generalised approach to managing stress in uniformed personnel. This fails to account for important factors that vary by agency, and even between officers in different roles within the same agency.

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Police Subculture and its Influence on Arrest Discretion Behaviour: An Empirical Study in the Context of Indian Police

Satyajit Mohanty[*]

Abstract

The century old arrest law in India was amended in 2009 with a view to reducing the number of avoidable arrests. But theanalysis of the official figures on arrest shows that amended law has not made any dent in the field law enforcements. The research problem arises out of this observation; if the statute, departmental guidelines, court rulings, police manual rules etc. have little influence on the arrest decision of the police, then what it is that considerably impacts such behaviour. Literature review shows that the organisational, subcultural, environmental, individual and situational determinants are at the forefront of arrest discretion behaviour. The study has empirically tested the impact of subculture on arrest discretion behaviour of police in India and its relative significance compared with organisational determinants. The study establishes that the subcultural determinants influence the arrest discretion twice as much as the organisational determinants, contrary to the popular perception that it is the organisation that through statutes, rules, regulations and compliance with court directivesinfluences the arrest decision. The findings to an extent explain the existing gap between legislative intents to reduce the number of avoidable arrest and its realisation on the field.

Keywords

Police subculture, arrest discretion, extralegal, determinant

"Arrest and detention in police lock-up of a person can cause incalculable harm to the reputation and self-esteem of a person. No arrest can be made in a routine manner on a mere allegation of commission of an offence made against a person. It would be prudent for a police officer in the interest of protection of the constitutional rights of a citizen and perhaps in his own interest that no arrest should be made without a reasonable satisfaction reached after some investigation as to the genuineness and bona fides of a complaint and a reasonable belief both as to the person's complicity and even so as to the need to effect arrest. Denying a person of his liberty is a serious matter." – Supreme Court of India[1]

Of the many duties performed by police, the arrest of suspect or accused of an offence remains at the core. The "legitimacy of coercive powers of detention, arrest and search comes about by virtue of a sovereign government that is bound by social contract with its citizens". As

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Author's Intro:

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agents or representatives of the government, police are expected to uphold the obligations of social contract (Young, 2011). Because, it is argued that the "authority of police is derived from the people through the social contract. The power is held in public trust" (Moll, 2006). The police authority is a creation of such social contract to preserve life, liberty and pursuit of happiness of majority in the society by keeping the criminal and deviant characters at bay. Arrest is one such legitimate authority of police which is subject matter of intense debate and controversy since the creation of modern police in the mid-nineteenth century. Law makers and courts across the globe have been working over a century now with new laws and rulings on how to regulate this power and put restraint on the arrest decision of police with more accountability.

1.　　Police Subculture

The informal organisational culture refers to the unwritten culture comprised of individual values and tradition that are communicated informally across from officer to officer (Walker& Katz, 2005). This may be referred to as police subculture.Researchers and practitioners have devoted considerable amount of time to understand the police subculture. It is understandable, given that culture is noted as an obstacle to police accountability, as a reason why police reforms fail, as a cause of police abuse of authority, as a mechanism for officers to cope with the hostile and uncertain work environments, and an explanation for discretionary behaviour (Ingram et al., 2013).

Subculture is a culture within a broader culture that may deviate in some aspects from the broader culture and influences daily decisions (Herbert, 1998). Anthony (2018) argues that the culture of the police department equates to organizational culture. The culture of police officers in the street is a subculture. A police

department has many of the components of organizational culture found in other organizations and industries, but what differentiates police culture from other organizational cultures is the constant potential for life-and-death encounters combined with the unique stresses and strains that originate in the policing environment (White & Robinson, 2014). An individual's organizational identity is related to organizational culture (Alvesson & Sveningsson, 2015), indicating that police culture has an impact on how an officer identifies and behaves.

Cox (1996) contends that the police subculture tells officers "how to go about their tasks, how hard to work, what kinds of relationships to have with their fellow officers and other categories of people with whom they interact, and how they should feel about police administrators, judges, the law, and the requirements and restrictions they impose." For example, since police officers are exposed to physical risk during their day to day functioning, they conceptualise the world as a "potentially toxic and lethal work environment". This conceptualisation often leads to arbitrary behaviour (Young, 2011). Some of the myths like, "police represent the thin line between chaos and orders" ("thin blue line"), "public potential hostile and untrustworthy" ("us and them") are deeply internalised by the members across the police organisations. Several scholars (McConville and Shepherd, 1992, Reiner, 1992) and Commission Reports (Wood, 1997, Mollen, 1994) confirm that "secrecy becomes protective armour shielding the force as a whole from public knowledge of infraction." "Code of silence" is something that applies to the rank and file. These discrete set of values are woven together to form a perceptual net that guides individual decisions (Brown, 1988).

The police often have to work in a potentially hostile environment for long hours within the

constraints of resources and with an objective to maintain order in the society. Researches have established that the members of the police organisation are guided by their own set of beliefs, attitudes and behaviour, what can be termed as police subculture. According to the seminal work of William Westley (1970), the police subculture is a crucial concept in the explanation of police behaviour and attitudes. The subculture, in his view, characterises public as hostile, not to be trusted, and potentially violent; this outlook requires secrecy, mutual support, and unity on the part of the police. Manning (1977) suggested that the inherent uncertainty of the police work, combined with the need for information control, leads to police team work, which in turn generates collective ties and mutual dependency. Police officers are influenced by the formal organisational structures and expressed organisational values and also by informal values, beliefs, norms, rituals, and expectations of the other police officers that are passed through the organisational culture and from one generation of police officers to another (Scaramella, Cox & McCamey 2011). Its influence begins early in the new officer's career when he is told by more experienced officers that training given in the police academies is irrelevant to "real" police work. (Bayley & Bittner, 1989). Sparrow, Moore and Kennedy (1992) argued that the police subculture creates a set of truth, according to which the officers are expected to live. It may be noted that there is some basis for each of these subcultural truths and each alienates police from the citizens.

- It is impossible to win the war on crimes without bending the rules
- Public are potentially hostile and untrustworthy.
- Citizens are unsupportive and make unreasonable demands.

- The police are the only real crime fighters.
- Loyalty to colleague counts more than anything else.
- No one understands the nature of police work but fellow officers.

Researchers have gone into details of these subcultural truths and come out with interesting findings and phenomena. The first of these perceived truths is what sociologist Carl B Klockers (1980) terms as "Dirty Harry dilemma" which rationalises vigilante justice. Klockers got it from the 1971 Warner Brothers film that dramatised a fundamental problem for police.A morally good end can employ whatever means necessary to accomplish the objective. The relevance and influence of this dilemma in every day police operations including in arrests is significant. Police officers generally perceive the criminal justice system is too liberal or ineffectual to deal with the hardened criminals.

The dangers associated with policing often prompt officers to distance themselves from the chief source of danger –the citizens. Thus, the police officers, who are socially isolated from public, and rely on each other for protection from a hostile and dangerous work setting, tend to develop an *"us versus them"* attitude towards public and a strong sense loyalty towards fellow officers (Terril, Paolin, & Manning, 2003).

Yet another distinct subculture that perpetuates in the organisation is the feeling and belief that police are the real crime fighters. The thin line between order and chaos is held by them. Once police withdraw from the scene, disorder will descend and chaos will prevail. In the 1950s Bill Parker, the Chief of LAPD, coined the term "thin blue line" to reinforce the role of LAPD in fighting crime and maintaining order in Los Angeles. As Parker explained the thin blue line, representing the LAPD, is the barrier between

law and order and social and civil anarchy (Lasley, 2012). The sentiments are echoed by the police organisations in India during stakeholders' meeting with the Law Commission of India for its 177th Report on "Law relating to arrest"[2]. In response to the consultation paper the state of Odisha justified the pre-amendment powers of arrest by police in cognisable offences by advocating that "the aggrieved public have come to see arrests of the culprits by the police as the first step in their yearning for justice. Any curtailment of this power will result in loss of public faith in the criminal justice system". It was furthered argued that "Indian society is generally perceived to be meek and relies considerably upon the armed police to keep order and hence police should not be weakened." Haryana, another Indian state, was of the view that "Indian public do not expect the police to release the offender immediately after arrest. They would accuse the police of collusion in most such cases." The state police expressed grave concern on the proposed amendment stating that "the proposal to limit the power to arrest an accused in bailable offences, if implemented, would cause tremendous damage to maintenance of public order in the society." These strong sentiments of police organisations in India against liberal arrest laws betray the deep-seated ethos of this subculture across the police organisations. However, the term in the Indian context the term may be re-phrased as 'thin khaki line", having regard to the shade of the uniforms donned by the Indian police.

"Code of silence" is a strong subcultural ethos in policing to denote the informal rule of secrecy that exists among the police officers not to report on colleague's errors, misconduct or brutality. Secrecy is a set of working tenets that loosely couple the police to accountability, that allow them to do their work and protect each other in the face of oversight interference (Caldero &Crank, 2004). This ethos compliments the "us

versus them" mind-set and "Dirty Harry" dilemma. Because police perceive the public as non-cooperative, unappreciative and are critical of their work, and because the "rules are to be bent" for espousing a greater social cause, the loyalty to a fellow colleague acts as a premium against the professional hazards one encounters in career advancement. The perceived feeling of protection from colleagues against the abuse of power, particularly against illegal arrests or excesses during arrest, gives a sense immunity to the officer and influences his discretionary powers.

1.1 Subculture as a determinant of Arrest Discretion

One of the most cited definitions of discretion is that offered by Kenneth Culp Davis (1969). He states that a "public officer has discretion whenever the effective limit on his power leave him free to make a choice among possible courses of action or inaction". This, of course, is a very broad definition of discretion which does not distinguish between acceptable and unacceptable bases for discretion. Accordingly, Davis went on to point out that the discretion allowed to officials is typically structured or "fettered" by policies or guidelines designed to ensure the acceptable exercises of discretion.According to Davis, discretion is not limited what is authorised or what is legal but includes all that is within the effective limits of officer's power. This phraseology is necessary because a good deal of discretion is illegal or has questionable legality. Another facet of the definition is that a choice to do nothing; perhaps inaction decisions are ten or twenty times as frequent as action decisions (Palmiotto, Unitthan, ibid). Discretion is not limited to substantive choices but extends to procedures, methods, forms, timing, and many other subsidiary factors.

The path breaking research of American Bar Foundation in the 50's and 60's brought about a paradigm shift in understanding the discretion

in criminal justice system[3]. The result shows that "the idea that police, for example, made arrest decisions simply on the basis of whether or not a law has been violated – as a generation of police leaders led the public to believe – was simply an inaccurate portrayal of how police worked. The police work is complex, that police use enormous amount of discretion, that discretion is at the core of police function" (Kelling. 1999). Davis (1969), one of the prominent legal scholars on discretion, observed that "the police are among the most important policy makers of our entire society. And they are far more discretionary determinations in individual cases than any other class of administrators; I know of no close second". Having accepted that discretion is inescapable and unavoidable part of policing, the law makers, courts and the police organisations have been grappling with the issues of regulating and taming discretion so that decisions are principled rather than arbitrary and they respect human and civil rights (Bronnit & Stenning, 2011).

Literature review establishes that factors like organisational, situational, subcultural, environmental and individual determinants are at the forefront of influencing the arrest decision on behalf of the law enforcement (Gaines & Kappeler, 2003, Groeneveld, 2005, Hidayet, 2011). The organisation through its policy, process, value and training create a structure that influences the arrest decision (Groeneveld, 2005). Subculture is a culture within a broader culture that may deviate in some aspects from the broader culture and influences daily decisions (Herbert, 1998). Anthony (2018) argues that the culture of the police department equates to organizational culture. The culture of police officers in the street is a subculture. Subcultural ethos is intangible and many of the subcultural ethos negatively influence the decision. In a democratic set up the police functions in an environment where the media, public opinion, public reaction and political culture create a complex maze within which the police take decisions. Each of these components either independently or in combination influence decision making processes of police. Literature review suggests that individual characteristics of officers on the one hand and officers' value, belief and attitudes on the other are seen as correlates of police decision (Hidayet, 2011). Finally, study establishes that situational determinants have considerable influence on arrest decision (Black, 1971, Hidayet, 2011). Some of the situational variables are; seriousness of crime, prior criminal record, demeanour of the offender, individual officer characteristics etc. (Gaines & Kappeler, 2003; Walker & Katz, 2005).

Out of the five determinants – organisational, situational, subcultural, environmental and individual – the first one comprises legal variables like statute, court directives, departmental guidelines, manual rules while the situational determinants are partly guided by legal factors like seriousness of the offence, offender's criminal record etc. and partly by some extralegal factors like demeanour of the offender and individual officers characteristics. Rest of the determinants are extralegal[44], complex and intangible in nature while considerably influencing the arrest decision. While the empirical research leaves little doubt that legal factors significantly influence arrest outcomes, arrest decision is not solely influenced by law, and that "policing is for the most part extralegal, for while officers work within the constraints of law, they seldom invoke law in performing police work" (Worden, 1989).

2.   Statement of Problem

The century old arrest law of India was amended in the year 2009 on the basis of recommendations of the Law Commission of India in its 177th Report[5]. The objective was to reduce the number of avoidable arrests. The

amended Section 41 Criminal Procedure Code[6] introduced a new provision of "service of notice" instead of formal arrest of an accused person for the offences punishable with imprisonment for less than or up to seven years. Analysis of substantive laws in India shows that the offences which prescribe punishment up to or less than seven years is two-third of the total penal offences. Following the new amendment, the arrest figures in India should have been reduced by two-third as similar proportion of offences are punishable up to or less than seven years of imprisonment in the substantive laws of India. But a study of arrest figures for the pre- and post-amendment periods shows that there has been very insignificant reduction in the arrest figures (1.18 arrest per offence in the post-amendment period as against 1.19 in the pre-amendment period[7]). The inquiry further delves into the question if the statute, departmental guidelines, court rulings, police manual rules etc. have little influence on the arrest decision of the police, then what it is that considerably impact such behaviour.

If in spite of the amended provision of the procedural law on arrest and with catena of court directives and departmental guidelines, the arrest figures in India do not show any appreciable decline, defeating the legislative intent, the inescapable conclusion that follows is the dominating role played by the complex set of extralegal factors in arrest decision. Subcultural factors are extralegal in nature, not regulated or sanctioned by law.In the absence of literature on police discretion and study on the subject in India, this research intends to explore these extralegal factors, particularly embedded within the conceptual space ofpolice subculture, its influence on arrest discretion with empirical investigation on Indian context on the basis of literature available internationally. The relative importance of the subcultural determinants over organisational determinants on arrest discretion

needs to be empirically tested to arrive at any conclusion.

3.   Objective of the study

With this background, the objectives of the study have been set; first, to find out if the subcultural determinant of arrest discretion collected on the basis of literature review from the West has validation in the Indian context; second, what is the relative importance of the subcultural determinant in influencing the arrest discretion behaviour of police compared with the organisational determinants which are legalistic and structured to ensure that the discretion is exercised within the boundaries of rules and statutes; third, the study aims to be interpretive, which means the researcher intends to provide explanations for the results obtained in this study through analysis of background study of Indian policing, laws and policies in India and by considering the interplay of variables in this study; fourth, on the basis of study findings some recommendations can be generated and may be interest to the policy makers, police leaders, practitioners and police researchers in India; fifth, the study has potential to contribute to the literature on subcultural influence on arrest decision behaviour being the first of its kind in the Indian context.

4.   Research Question

Having set the research objective against the background of the research problem, the following research questions have been developed

RQ 1.   Is the subcultural determinant of arrest discretion behaviour found in the Western literature significant for police in India?

RQ 2.   Does the extralegal determinant like subculture impact the arrest discretion behaviour of police in India?

RQ 3. What is the relative importance of subcultural determinant as compared with the organisational determinant?

Research Method and Design

The major approach in this study is quantitative data analysis. The variables under each determinant have been operationalised with appropriate response statements and respondents have been asked to express their degree of agreement or disagreement with each item on a classical Likert scales with five choices. A total of 222 police respondents from Odisha police and 138 officers from Indian Police Service from different states of India have participated in the study as random samples. Multiple regression analysis, combination of simple frequency table and cross tabulation have been employed for data analysis by adopting SPSS software[88] Statistical Package for Social Science is a software package used for interactive or batched statistical analysis. In the present study SPSS 16.0 has been used for correlation, multiple regression analysis.

5.   Study Variable

From the preceding discussionssixteenvariables representing the dimensions under organisational (four each for policy, process and values),and subcultural determinants have been selected from literature review for their operationalisation in the context of India police. Table 1 shows the study variables under three dimensions of organisational determinant and under subcultural determinant.

Table 1: Study Variables

A.   Organisational Determinants:

1.   *Policy Dimensions*

    a.   Specific Statutory Guidelines

    b.   Court Pronouncement e.g., Arnesh Kumar guidelines

    c.   Extensiveness of arrest policy e.g., Crime Branch Circular

    d.   Internal Review

2.   *Process dimensions*

    a.   Supervisory monitoring

    b.   Weightage to supervisory instructions over personal judgement

    c.   Discovery of procedural violations

    d.   Departmental /legal actions

3.   *Value Dimensions*

    a.   Independence

    b.   Discretionary Choices

    c.   Training

    d.   Community Policing

B.   Subcultural Determinants:

    a.   "Dirty Harry Dilemma" (criminal justice system is ineffectual)

    b.   "Us versus them" (public potentially hostile and untrustworthy)

    c.   "Thin Blue Line" (thin line between order and chaos)

    d.   "Code of Silence" (to maintain solidarity & protect each other)

Each indicator needs to be different from other indicators in that each measures a different aspect of the specified dimension. This is consistent with the statistical notion that indicators should be additive, such that the accumulation of the indicators individually captures different aspects of the dimensions and

collectively they represent the conceptual space defined by the dimension (Groeneveld, 2005).

The sixteen indicators must be translated into research terms to effectively measure the concept. This presents a measurement challenge. Since the determinants and indicators developed in this study are constructed to be additive, the appropriate scaling technique is that of Summated Ratings and scale is "Likert scales". It assumes that each scale item is a statement, either positive or negative, related to the concept of interest, that the statements are additive in nature and that the respondents will be asked to express their degree of agreement or disagreement with each item. The process of scoring the scale is achieved by assigning numeric value to the response format. The classical Likert scales with five choices, stating from "Strongly Agree" to "Strongly Disagree" have been chosen for this study. The response format is worded such that strong agreement or disagreement with the item indicates higher degree of influence with respect to the indicator. Accordingly, a value of 5 has been assigned to "strongly agree" and each item choice after is numerically smaller until a "strongly disagree" receives a value of 1.

Each variable under a major a determinant or concept needs to be qualified with a statement which should be meaningful to the "world of experience" and collectively they must represent the concept. To take the example of influence of sub-culture on arrest discretion behaviour, the conceptual space of "sub-culture" is intended to be represented collectively by (i)"Dirty Harry dilemma" (criminal justice system is ineffectual), (ii)"us versus them" (public potentially hostile and untrustworthy), (iii)"thin blue/khaki line" (thin line between order and chaos), (iv)"code of silence" (to maintain solidarity and protect each other). Each necessarily needs to be qualified with a statement which the respondent must be able to relate to the "world of experience" and when responded must indicate the degree of his/her agreement or disagreement. The following is an example of Likert scales used for this study to operationalise "dirty Harry dilemma" and "specific statutory guidelines"

"Dirty Harry dilemma"

"Arrest and pre-trial custody during investigation is the only punishment meted out to anti-social and rowdy elements as they are most likely to get acquitted"

"Specific statutory guidelines"

"The amended provisions of Sec 41 Cr PC (arrest in cognizable offences) are very specific and provide detailed guidelines on arrest in cognizable cases"

6.   Sampling Technique

The study has been undertaken in the context of Indian police.Despite 29 state police and 7 union territory police organisations and diversity in police forces, there is a good deal of commonality among the organisations. "This is due to four main reasons:

1.   The structure and working of the State Police Forces are governed by the Police Act of 1861, which is applicable in most parts of the country, or by the State Police Acts modelled mostly on the 1861 legislation.

Table 2: Response Format Example

Strongly Agree	Agree	Cannot say	Disagree	Strongly Disagree
5	4	3	2	1

2.	Major criminal laws, like the Indian Penal Code, the Code of Criminal Procedure, the Indian Evidence Act etc. are uniformly applicable to almost all parts of the country.

3.	The Indian Police Service (IPS) is an All India Service, which is recruited, trained and managed by the Union Government and which provides the bulk of senior officers to the State Police Forces.

4.	The quasi-federal character of the Indian polity, with specific provisions in the Constitution, allows a coordinating and counselling role for the Centre in police matters and even authorizes it to set up certain central police organisations." (CHRI, 2002)

5.	The rulings of the Supreme Court of India on police matters are applicable and binding to all state and union territory police organisations

In this study, the state of Odisha is taken as a universe.Besides, random selection of senior officers from India Police Service from across different states and union territory polices of the country on senior training course at SVP National Police Academy, Hyderabad have been taken as respondents to make the study more broad based.Therefore, inductively, the research findings are expected to mirror pan Indian characteristics of police discretion behaviour in making arrests in cognisable offences.A total of 360 respondents, both from Odisha state police (222) and senior members of Indian Police Service from other state and union territory polices (138) have participated in this study.

## 7.	Data Analysis Technique

One of the analytical goals of the study is to characterise and examine   how far and to what extent the organisational and sub-cultural determinants influence arrest discretion behaviour. In situation like this, where the research focuses on examining the impact of several independent variables (all the dimensions and determinants) on a single dependant variable (arrest discretion behaviour of police), multiple regression is the appropriate analysis technique. This approach is used as a means of quantifying both the amount of variance explained by relative importance of each independent variable and by all the independent variable acting together on the dependent variable.

Multiple regression is a technique based upon the general linear model of statistics. This statistical model is designed to examine the relationship among a number of independent variables and one dependent variable. It answers two questions about any statistical model: what is the relative importance of the independent variables in causing change in the dependent variable, and how much variance in the dependent variable is explained by the independent variables acting together. The relative importance of independent variables is assessed using the standardised regression coefficient, also known as beta (â) coefficient. It is interpreted as the amount of change in the dependent variable associated with a standardised one-unit change in the focal independent variable, controlling for the effects of all other independent variables. Beta coefficients vary between a lower anchor value of -1.0 and upper limit of +1.0. The higher the coefficient value, the greater the amount of unique change caused in the dependent variable by the focal predictor (independent variable). Consequently, greater is the relative importance of that independent variable (Groeneveld, 2005).

Two tests are essential for meaningful interpretation of the beta coefficients. Beta coefficients are tested for statistical significance. A Student's 't' statistics is

calculated to assess whether the tabulated beta coefficient is statistically significant. For the meaningful regression analysis, the predictors should be statistically significant. The other assumption is that the predictor (independent) variables are not intercorrelated. The assumption is considered critical in regression analysis because the presence of such intercorrelations — referred to as multicollinearity — causes significant difficulty in interpreting coefficients. Multicollinearity means one may not be able to free the influence of one independent variable from the other with which it is correlated.

The second goal is to find out from among the dimensions (predictor or independent variable) which has significant contribution towards influencing the determinants (conceptual space) – organisational and subcultural – and which among two has more contribution towards influencing arrest discretion behaviour of police. This will be achieved by multiple regression technique.

8. Key Findings

The key findings have been discussed on the basis of values of beta coefficients of individual variables operationalised to define the conceptual space of a dimension and taking the combined value of the variables to analyse the relative importance of a dimension or determinant. Besides, frequency distributions of responses have been analysed for the significance of the variables.

8.1 Organisational Determinant

The research literature indicates that the way the organisation creates a structure for arrest discretion flows from three principal sources; official policy, process, and values. These dimensions capture the channel through which the officers can influence or constraint the arrest discretion behaviour of the officers. One of the empirical tasks is to find out which among these three has maximum impact on arrest discretion in presence of the other two. While the data analysis shows that all three are highly significant to the organisational determinant, the process dimension with highest beta coefficient of 0.569 among the three dimensions is the most sensitive predictor with maximum effect on the organisational determinants, followed by the policy dimension (0.513) and value dimension (0.444). The findings give empirical support to the hypothesis that the way the organisation creates a structure for arrest discretion flows from three principal sources; official policy, process, and values. These dimensions capture the channel through which the departmental supervisory officers can influence or constraint the arrest discretion behaviour of the officers.

8.2 Subcultural Determinant

Four dimensions of informal organisational or subcultural determinants have been carefully chosen for the study— "Dirty Harry dilemma", "us versus them", "thin blue (khaki) line", and "code of silence". In course of the data analysis of the frequency tables under subcultural determinants, it has been established that majority of the respondents either agreed or strongly agreed to the all four strong subcultural traits within the police organisation with varying degrees of endorsement ranging from 55 to 68 percent. It is to be found out whether the dimensions capture the essence of subcultural ethos and how do they behave towards one another to impact the core subcultural determinant by linear regression analysis. Table 3 shows the mean, standard deviation, t-test results, correlation coefficients and beta coefficient values of the four variables coded, X_1, X_2, X_3 and X_4 respectively.

The t-statistics for the factors considered for the study are highly significant both at 5% and 1% level of significance with values ranging from 49.465 (for X_1) to 72.091 (for X_2). The

Table 3: Regression Analysis of Subcultural Determinants

Factors (Independent variables or predictors)	Code	Mean	t-test	Correlation coefficient (r)				βcoefficient
				BX_1	BX_2	BX_3	BX_4	
Dirty Harry Dilemma	X_1	3.44(±1.32)	49.465	1.00				0.447
Us versus them	X_2	3.61(±0.95)	72.091	0.21	1.00			0.322
Thin Blue (khaki) line	X_3	3.33(±1.15)	55.158	0.14	0.13	1.00		0.388
Code of silence	X_4	3.25(±1.27)	48.619	0.25	0.16	0.24	1.00	0.430

NB: The values in the parenthesis represent the standard deviation. t-test at 5% level of significance = 1,960 and for 1% level of significance = 2.576 (degree of freedom = 359)

correlation coefficient ('r') value between any two factors varies from 0.13 (X_2 & X_3) to 0.25 (X_1 & X_4), which is of low value. With both presuppositions – statistical significance & absence of multicollinearity – being statistically established, the beta coefficients can be meaningfully interpreted. The factor, "Dirty Harry dilemma" with highest beta coefficient of 0.447 among the four independent variables is the most sensitive predictor within the subculture determinants with highest impact on the dependent variable i.e., subculture, followed by the factor "code of silence" (0.430). Rest two factors are also positively correlated with subculture determinants carrying values of 0.388 (thin blue/khaki line) and 0.322 (us versus them.

The empirical tests validate the research presupposition that the factors taken to represent the subcultural determinants are highly relevant, relatively independent of each other's sphere of influence and yet collectively define the conceptual space.

8.3 Relative significance Organi-sational, and Subcultural Determinants over Arrest Discretion

One of the key assumptions of this study is that determinants, such as, organisation through its policy, process and value dimensions and subcultural ethos, operating environment within which the police function, situational and individual factors, either individually or in combination, influence the arrest discretion behaviour of the police. Out of the five such determinants, the first twodeterminants – organisational and subcultural – have been operationalised for statistical analysis with several anchor variables. One of the tasks is to find out the relative importance of the determinant from among the two in influencing the arrest discretion behaviour (dependent variable) and to find out which between the two determinants (independent or predictor variables) has more influence on the arrest discretion behaviour while controlling for all of the other determinant.The subcultural determinant with highest beta coefficient of 0.593 between the two determinants is the more sensitive with greater effects on arrest discretion behaviour, and organisational determinants with beta value of 0.295 is a distance second (please refer Table 4).

What could the intuitive support for subcultural determinants impacting the arrest discretion behaviour more than the organisational determinants, which are well defined with rules, regulations, statutes, departmental sanctions

etc.? The answer is not far to seek. The organisational determinants are constrained by statutes, rules, departmental regulations, guidelines, and court directives, which all can be categorised as legal determinants. They are more objective and hence less likely to be susceptible to individual vagaries. Whereas, subculture determinant is intangible in nature, susceptible to individual interpretation and most importantly extralegal in characteristics. Not surprisingly, subcultural determinant is empirically proved to impact the arrest discretion behaviour more than the organisational determinant. On the other words, officers react to the organisational determinants more objectively and to the subcultural determinants more subjectively.

9.   Discussions on Research Questions

Having set the research objective against the background of the research problem, the following research questions have been developed

RQ 1.   Is the subcultural determinant of arrest discretion behaviour found in the Western literature significant for police in India?

RQ 2.   Does the extra-legal determinant like subculture impact the arrest discretion behaviour of police in India?

RQ 3.   What is the relative importance of subcultural determinant compared with the organisational determinant?

Two statistical methods have been employed for data analysis. First, frequency distributions of the responses which makes it possible for a detailed analysis of the structure of the population with respect to a given characteristics. On the basis of frequency of agreement to a response statement a general proposition can be drawn on how much the population agrees to the existence of response

predictors that influence the arrest discretion behaviour. The response format is worded such that strong agreement or disagreement with the item indicates higher degree of influence with respect to the indicator. Second, multiple regression method has been employed to examine the relationship among a number of independent variable and one independent variable. It answers two questions about any statistical model: what is the relative importance of the independent variables in causing change in the dependent variable, and how much variance in the dependent variable is explained by the independent variables acting together. The relative importance of independent variables is assessed using the standardised regression coefficient, also known as beta (â) coefficient. Beta coefficients vary between a lower anchor value of -1.0 and upper limit of +1.0. The higher the coefficient value, the greater the amount of unique change caused in the dependent variable by the focal predictor (independent variable). Consequently, greater is the relative importance of that independent variable (Groeneveld, 2005).

To answer the question, if the determinants are significant for the police in India, firstly, it must be shown that the majority of the population endorses the response statements by "agreeing or "strongly agreeing" with them. On the basis of frequency of agreement to a general statement an inference can be drawn on how much the population agrees to the existence of response predictor that influence the arrest discretion. This requires simple interpretation of the frequency table. Secondly, from the regression analysis tables the study of beta coefficient values are likely to throw insight into the significance and relative importance of each independent variable in influencing the arrest discretion behaviour (the dependent variable). Table 4 contains the average frequency distribution of agreement (both "agree and "strongly agree") and the beta coefficient values of the predictor variables for the

determinants; organisation, and subculture. The significance of the two determinants have been shown in one Table for answering the RQ 3, which calls for relative values for comparative study.

The majority of the population endorses the response statements designed to capture the determinants or dimensions with the frequency distribution varying from 60.5 to 82.8 percent for "agree/strongly agree" responses. This testifies empirically that majority of the population agrees to the existence of the response predictors that influence the arrest discretion. The positive values of beta coefficients signify that both the determinants are positively correlated with arrest discretion. Subculture with higher value is the more sensitive dependent determinant among the two in influencing arrest discretion behaviour. The study thus validates that the determinants of arrest discretion found from literature of West are highly significant to police in India. This answers the RQ 1.

With beta coefficient value of 0.593 (say 0.6) ,the subculture determinants, impact the arrestdiscretion to the extent of sixty percent and organisational determinant with beta coefficient of 0.295 (say 0.3), impacts the arrest discretion to the extent of thirty percent. In other words, subcultural determinant can influence the arrest discretion behaviour twice as much as the organisational determinants. This answers

the RQ 2 and 3. Now, having empirically established the research questions, it is essential to examine their implications in arrest discretion behaviour.

The findings on the face of it appear to be counter intuitive. How could the organisational determinants with statutes, rules, court directives, guidelines, regulations, disciplinary mechanism in place for violation of departmental norms etc. influence the arrest discretion behaviour to the extent of half that is by the subcultural determinants? The answer lies in explaining the legal – extralegal conundrum. The factors comprising the organisational determinants are strictly legal ones, interpreted objectively, leaving little room for subjective interpretation of a decision. Whereas, the conceptual space for subcultural determinants are captured by complex and intangible extralegal factors, not regulated or sanctioned by law. Subjectivity of an officer in addressing a situation is key here leaving little scope for objective assessment to arrive at a decision. It's the complex and intangible nature of the subcultural determinants that have the mischief potential to influence the discretion more than the organisational determinants, which arestructured and fettered by policies and guidelines and designed to ensure acceptable bases for discretion.

The study implies that suitable mechanism should be put in place by the police leadership to identify

Table 4: Frequency Distribution and Beta Coefficient of the Determinants

Determinants	Dimensions	%Agree/ Strongly agree	âcoefficient
Organisational	Policy	82.8	0.295
	Process	65.0	
	Values	78.0	
Subcultural	60.5	0.593	

the negative effects of the subculture, decide the changes needed and support the desired changes.

10.   Recommendations

This study establishes empirically that subcultural determinants play a dominant role in arrest discretion behaviour of police in India, more than the legal factors manifested by the organisational determinants. An adherence to police subculture may foster negative and cynical attitude towards citizens, even the legal system (Cochran & Bromley, 2003). The 'us and them" and "Dirty Harry dilemma" are the manifestations of such subcultural ethos. Wood (1997) argues that the adherence to subculture will reinforce peer loyalty so that police misconduct is undetected because of the "code of silence". Anthony (2018) suggests that changing culture of a police organisation and of the officers requires training initiatives that will be accepted, supported and implemented by the officers. It is recommended that police leadership consider training on ethics and practice of community policing to improve the department's operational image (Mohanty & Mohanty, 2014) and to overcome the negative aspects of police culture. The police leaders should first determine the desired culture they wish to instil, compare it with the existing culture to decide the changes needed, create disaffection with the existing culture and support for the desired changes.

11.   Contribution of the Study

The literature on police discretion is relatively unknown in India, not to speak of arrest discretion behaviour. This study is a maiden attempt to empirically investigate the determinants of arrest discretion behaviour of police suggested in Western literature in the context of police in India. Without any previous reference point, this study may be termed exploratory in nature in that it provides an overall insight into how the field police officers and senior supervisory officers in India perceive the widely discussed determinants of arrest discretion. The study empirically establishes that the subcultural determinants influence the arrest discretion behaviour twice as much as the organisational determinants, contrary to the popular perception that it is the organisation through statutes, rules, regulations and compliance with court directives influence the arrest decision. The findings to an extent explain the existing gap between legislative intents to reduce the number of avoidable arrest and its realisation in the field law enforcement.

The components of organisational determinants are legal factors whereas those of subcultural are extralegal ones. Extralegal factors are intangible and complex, not regulated or sanctioned by law, yet have influence on shaping the final outcome of the decision. The decision making process within the discretionary boundary is a complex exercise of legal-extralegal conundrum. The colourful exercise of arrest power or abuse of arrest discretion is often clothed as a legitimate exercise because the boundary between legal and extralegal considerations is thin and not well defined. This study brings some amount of clarity into the arrest decision making process so that the police leaders can identify the factors contributing to the discretionary abuse and put proper accountability mechanism in place to prevent such abuse.

Footnotes

i   Joginder Kumar v. State of UP, 1994 AIR 1349

1   The 177th Report on Law Relating to Arrest was taken up by the Law Commission of India suo motu with a view to clearly delineate and regulate the power of arrest without warrant vested in the police by Sec 41 and other

sections of Criminal Procedure Code. The Commission recommended sweeping changes in the arrest laws in its Report in the year 2001 which were later inserted in the Criminal Procedure Code by amendments in the year 2009.

2   In 1953, the American Supreme Court Justice, Robert H. Jackson, believing criminal justice in a state of crisis, called for major national study of the criminal justice agencies by the American Bar Association (ABA). The findings of the decade long research, adopting methodology of field observation and "law in action", were starling that brought about a paradigm shift in the understanding of discretion in criminal justice system.

3   Extralegal is not synonymous with illegal. Extra-legal factors are those factors in decision making which are not regulated or sanctioned by law, yet have influence on shaping the final outcome of the decision.

4   The procedures for arrest in the Criminal Procedure Code 1898 retained its language and form till 2009 when on the basis of recommendations of the 177th Report of the law Commission of India amendments were brought in. The Law Commission recommended the sweeping changes in the arrest law citing the legal principles of "reasonableness", 'necessity" and "restraints".

5   Criminal Procedure Code is the main legislation on procedure for administration of substantive criminal laws of India. Enacted in 1973, it provides for procedures of arrest, police investigation and court proceedings

6   Figures from Crime in India, NCRB, Government of India from 2006 to 2014

7   Statistical Package for Social Science is a software package used for interactive or batched statistical analysis. In the present study SPSS 16.0 has been used for correlation, multiple regression analysis.

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Analysis and Investigation of Clues in Cases of Doubtful/Motivated Allegations/ Implication of Rape

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"The Nineteenth Dynasty (c. 1225 B.C.) Egyptian tale of Anubis and Bata has many similarities to the story of Joseph and Potiphar's wife. In both cases a younger man is seduced by his master's wife and then falsely accused of rape when he refuses to give into her desires."

Excepts from Book of Genesis, Chapter 31, pg- 24-25, Bible Study Resource Centre[1]

Abstract

Rape is an offence against a woman, causing **harm, which transcends well beyond her sacred body to her mind and psyche alike.** The scars left by this offence haunt her for the rest of life.

It has been believed, rather **assumed**, that in **Indian culture** it is just not possible that a **woman can ever implicate any male person in a false allegation of her rape**. The same has also been generally held by our **judiciary** for long. By and large these factors are not relevant to India, and the Indian conditions. In 1983 the most notable remarks of our Apex court on this subject are as under-

''.......Without the fear of making too wide a statement or of overstating the case, it can be said that **rarely will a girl or a woman in India make false allegations of sexual assault** on account of any such factor as has been just enlisted. The statement is generally true in the context of the urban as also rural Society. It is also by and large true in the context of the sophisticated, not so sophisticated, and unsophisticated society. Only very rarely can one conceivably come across an **exception** or two and that too possibly from amongst the urban elites. (**Bharwada Bhoginbhai Hirjibhai v. State of Gujarat**[2]**)."**

However, the assumption underlined in the above mentioned judgment of our Apex Court, has been successfully contested in a large number of cases before the courts during trial as well at appellate stage (High Courts/Supreme Court) 'n' number of times after 1983. In the face of incontrovertible evidence, in some cases, the reliance on the hitherto held **assumption in favour**

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of the victim (female) has undergone qualitative change to a significant extent, especially during the last two decades. It will be useful to **survey** the latest trend of making so called **Doubtful/Motivated Allegations/Implication of Rape** respecting this grave crime, literally amounting to blatant and wilful **abuse of the due process of law**, not only in our country but also beyond.

The incidence of **Doubtful/Motivated Allegations/Implication of Rape**, and extent thereof, for obvious practical difficulties in its documentation on an empirical basis, can, at best, be inferred from the study of judgements of cases of this nature, after their final adjudication by the courts of competent judicature.

An attempt has been made, in this document by way of survey of some such cases to arrive at some reasonable conclusion respecting this very disturbing and disconcerting aspect of sexual assaults (rape) in our country. **Our survey of a good number of cases actually decided by our judiciary conclusively proves that the malaise of levelling false allegation of rape/ doubtful allegation of rape by the so-called victims is no longer generally unheard in our country.** The details of the cases discussed in this document also suggest that this unhealthy and unethical tendency has not only come across but it has assumed significant proportion also in our country.

It will be quite fair that while showing utmost sensitivity and concern against any kind of sexual offences in our country it will also be equally necessary to **prevent misuse/abuse of the process of law** to demolish the reputation of individual by levelling motivated/false charges of rape on the part of victims. **One can imagine how painful it would become were the allegations levelled to be found as patently false and motivated. One can also imagine the irreparable injury it can cause to the public image of the person targeted.** Therefore, it is important that while dealing with the deterrent and preventive aspects of the offence of sexual assaults we should also keep in mind the very grave consequences of a false allegation of rape on him personally, socially, psychologically and impact on his family life, in a relatively conservative society like India. It has been concluded and recommended that there is an urgent need to revisit this subject with a view to effecting such changes in the law and administration of criminal justice as shall address concerns of all the stakeholders in their pursuit of justice.

Keywords

Rape, False Allegation, Prosecutrix, Survivor, India, Crime, Survey

Introduction

Rape is an offence against a woman, causing harm, which transcends well beyond her sacred body to her mind and psyche alike. The scars left by this offence haunt her for the rest of life. According to the **National Crime Records Bureau** (MHA) there were **2487 cases** registered in all over India during the year **1971** under **section 376 of I.P.C**, as against **21,397**, in **2009 (Crime in India 2009)[3]. It amounts to an overall growth of** 860.35% from 1971 to 2009. During **2016** a total of **38,947[4] cases** of rape were registered all over the country as against **2,487** in the year 1971. It converts into a cumulative growth of **1566.02**% from 1971 to 2016.(the data has been restricted to the latest publication of Crime in India by the NCRB).

Assumption against the probabilty of Doubtful/Motivated Allegations/Implication of Rape

It has been **believed, rather assumed**, that in Indian culture it is just not possible that a woman can ever implicate any male person in a **false allegation** of her rape. The same has also been generally held by our judiciary for long.

The above line of thinking was amply manifested in the following judgment of our Supreme Court, delivered way back in 1983 in Bharwada Bhoginbhai Hirjibhai v. **State of Gujarat**[2], where apex court had explained the reasons behind why an Indian female had never levelled a false allegation of rape and the possibility of the same in Western world.

However, the **assumption** underlined in the above mentioned judgment of our Honourable Apex Court, has been **successfully contested** in a large number of cases before the courts during trial as well at appellate stage (High Courts/Supreme Court)'n' number of times after 1983. **In the face of incontrovertble evidence, in some cases, the reliance on the hitherto held assumption in favour of the victim (female) has undergone qualitative change to a significant extent, especially during the last two decades**. Therefore, it will be useful to survey the latest trend on this important aspect of such a grave crime, literally amounting to blatant and wilful abuse of the due process of law, not only in our country but also beyond.

Definition of the offence of rape and punishment there for

The offence of **Rape**, in various forms, and punishment there for has been given in **sections 375 to 377 of the Indian Penal Code, 1860(IPC).** The same are extracted below for ready reference:-

Sec. 375 of I.P.C- A man is said to commit "**rape**" if he-—

a.   penetrates his penis, to any extent, into the vagina, mouth, urethra or anus of a woman or makes her do so with him or any other person; or

b.   inserts, to any extent, any object or a part of the body, not being the penis, into the vagina, the urethra or anus of a woman or makes her do so with him or any other person; or

c.   manipulates any part of the body of a woman so as to cause penetration into the vagina, urethra, anus or any part of body of such woman or makes her do so with him or any other person; or

d.   applies his mouth to the vagina, anus, urethra of a woman or makes her do so with him or any other person, **under the circumstances falling under any of the following seven descriptions**:—

Firstly—against her **will.**

Secondly—**without** her **consent.**

Thirdly—with her consent, when her **consent has been obtained** by putting her or any person in whom she is interested, in **fear of death or of hurt**.

Fourthly— with her consent, when the man knows that he is not her husband and that her consent is given because she believes that he is another man to whom she is or believes herself to be lawfully married.

Fifthly—with her consent when, at the time of giving such consent, **by reason of unsoundness of mind** or **intoxication** or the

administration by him personally or through another of any **stupefying or unwholesome Substance,** she is **unable to understand the nature and consequences** of that to which she gives **consent.**

Sixthly—with or without her consent, when she is **under eighteen years of age.**

Seventhly—when she is **unable to communicate consent**.

Explanation I.—For the purposes of this section, "**vagina**" shall also include **labia majora**.

Explanation 2.—Consent means an unequivocal voluntary agreement when the woman by words, gestures or any form of verbal or non-verbal communication, **communicates willingness to participate** in the specific **sexual act:**

Provided that a woman who does not physically resist the act of penetration shall not **by the reason only of that fact, be regarded as consenting to the sexual activity.**

Exception I.—A **medical procedure** or intervention shall not constitute rape.

Exception 2.—Sexual intercourse or sexual acts by a man with his own wife, the **wife not being under fifteen years of age, is not rape.'.**

Recently the Supreme Court struck down this part of the exception clause (Exception 2) in the matter of **Independent Thought** v. **Union of India**[5] (Vide para 1)

In the case of **Eera through Dr. Manjula Krippendorf** v. **State (Govt. of NCT of Delhi)**[6] while rejecting the appeal of the appellant to transfer a rape case on a mentally retarded lady whose biological age was around 39 years but mental age is approximately 6 - 8 years to POCSO court, apex court held that Biological age will be taken into consideration and not mental age for the purpose of trial in POCSO cases.

Deepak Gulati v. **State of Haryana**[7] - The Apex court had held that crime against women and children violates human rights and it's a crime against society as it causes psychological, physical harm and degrades and defiles victim's soul, honour and dignity and leaves a permanent scar on life.

Mandatory registration of FIR- In **Lalita Kumari** v. **Government of Uttar Pradesh and Ors**[8] - Constitution bench of the Apex court comprising P Sathasivam CJI, B.S. Chauhan, Ranjana Prakash Desai, Ranjan Gogoi, S.A. Bobde JJ held that registration of FIR is mandatory under Section 154 of the Code, if the information discloses commission of a cognizable offence and no preliminary inquiry is permissible in such a situation.

Punishment for rape

The punishment provided for the offence of rape committed under situations has been revised upward vide The Criminal Law Amendment Act (2018), Act. No- 22 of 2018, which has been published in the Gazette of India No- 35, on 11th day of August, 2018. It aims at increasing deterrence value of the punishment.

Sec.376 of I.P.C

1. Whoever, except in the cases provided for in sub-section (2), commits rape, shall be punished with rigorous imprisonment of either description for a term which shall not be less than ten years, but which may extend to imprisonment for life, and shall also be liable to fine.[8a]

2. Whoever—

   a. being **a police officer**, commits rape—

i. in the premises of any station house; or

ii. on a **woman in such police officer's custody** or in the custody of a police officer subordinate to such police officer; or

b. being a **public servant,** commits rape on a **woman in such public servant's custody** or in the custody of a public servant subordinate to such public servant; or

c. being a **member of the armed forces** deployed in an **area** by the Central or a State Government commits rape in such area; or

d. being on the **management or on the staff of a jail, remand home or other place of custody** established by or under any law for the time being in force or of a women's or children's institution, commits **rape on any inmate** of such jail, remand home, place or institution; or

e. being on **the management or on the staff of a hospital**, commits **rape on a woman** in that hospital; or

f. being a **relative, guardian or teacher of, or a person in a position of trust or authority** towards the woman, commits **rape on such woman**; or

g. commits rape during **communal or sectarian violence**; or

h. commits rape on a woman knowing her to be **pregnant;** or

i. commits rape on a woman when she is **under sixteen years of age**; or

j. commits rape, on a woman **incapable of giving consent**; or

k. being in a **position of control or dominance** over a woman, commits rape on such woman; or

l. commits rape on a **woman suffering from mental or physical disability**; or

m. while committing rape **causes grievous bodily harm or maims or disfigures or endangers** the life of a woman; or

n. commits rape **repeatedly on the same woman**,

[9]shall **be punished with rigorous imprisonment for a term which shall not be less than ten years, but which may extend to imprisonment for life,** which shall mean **imprisonment for the remainder of that person's natural life**, and shall also be liable to fine.

Explanation.—for the purposes of this sub-section,—

a. "**armed forces**" means the naval, military and air forces and includes any member of the Armed Forces constituted under any Law for the time being in force, including the paramilitary forces and any auxiliary forces that are under the control of the Central Government, or the State Government;

b. "**hospita**l" means the precincts of the hospital and includes the precincts of any institution for the reception and treatment of persons during convalescence or of persons requiring medical attention or rehabilitation;

c.   "**police officer**" shall have the same meaning as assigned to the expression "**police**" under the **Police Act, 1861;**

d.   "**women's or children's institution**" means an institution, whether called an orphanage or a home for neglected women or children or a widow's home or an institution called by any other name, which is **established and maintained for the reception and care of women or children**.

[9](*3*) Whoever, commits rape on a woman under sixteen years of age shall be punished with rigorous imprisonment for a term which shall not be less than twenty years, but which may extend to imprisonment for life, which shall mean imprisonment for the remainder of that person's natural life and shall also be liable to fine:

Provided that such fine shall be just and reasonable to meet the medical expenses and rehabilitation of the victim:

Provided further that any fine imposed under this sub-section shall be paid to the victim.

Punishment for causing death or resulting in persistent vegetative state of victim-

Sec. 376A of I.P.C-. Whoever, commits an offence punishable under sub-section (l) or sub section (2) of section 376 and in the course of such commission inflicts an injury which **causes the death** of the woman or causes the woman to be in a **persistent vegetative state**, shall be punished with rigorous imprisonment for a term which shall **not be less than twenty years, but which may extend to imprisonment for life, which shall mean imprisonment for the remainder of that person's natural life, or with death.**

[9]376AB. Whoever, commits rape on a woman under twelve years of age shall be punished with rigorous imprisonment for a term which shall

not be less than twenty years but which may extend to imprisonment for life, which shall mean imprisonment for the remainder of that person's natural life, and with fine or with death:

Provided that such fine shall be just and reasonable to meet the medical expenses and rehabilitation of the victim:

Provided further that any fine imposed under this section shall be paid to the victim.

Sexual intercourse by husband upon his wife during separation-

Sec.376B of I.P.C- Whoever has sexual intercourse with his own wife, who is living separately, whether under a **decree of separation or otherwise, without her consent**, shall be punished with imprisonment of either description for a term which **shall not be less than two years but which may extend to seven years**, and shall also be liable to fine.

Explanation.—In this section, "sexual intercourse" shall mean any of the acts mentioned in clauses (a) to (d) of section 375.

Sexual intercourse by person in authority-

Sec. 376 C of I.P.C whoever, being—

a.   in a position of **authority or in a fiduciary relationship**; or

b.   a **public servant**; or

c.   **superintendent or manager of a jail, remand home or other place of custody** established by or under any law for the time being in force, or a women's or children's institution; or

d.   on the **management of a hospital** or being on the staff of a hospital, **abuses** such position or fiduciary relationship to **induce or seduce**

any woman either in his custody or under his charge or present in the premises to have sexual intercourse with him, such sexual intercourse **not amounting** to the offence of **rape**, shall be punished with **rigorous imprisonment of either description for a term which shall not be less than five years, but which may extend to ten years**, and shall also be liable to fine.

Explanation 1.—In this section, "sexual intercourse" shall mean any of the acts mentioned in clauses (a) to (d) of section 375.

Explanation 2. —For the purposes of this section, **Explanation I** to **section 375** shall also be applicable.

Explanation 3.—"**Superintendent**", in relation to a jail, remand home or other place of custody or a women's or children's institution, includes a person **holding any other office** in such jail, remand home, place or institution by virtue of which such person **can exercise any authority or control** over its inmates.

Explanation 4.—The expressions "**hospital**" and "**women's or children's institution**" shall respectively have the same meaning as in **Explanation** to **sub-section (2)** of **section 376**.

Gang rape-

Sec. 376 D of I.P.C- Where a woman is **raped by one or more persons constituting a group** or acting in furtherance of a **common intention**, each of those persons shall be deemed to have committed the offence of rape and shall be punished with **rigorous imprisonment for a term which shall not be less than twenty years, but which may extend to life** which shall **mean**

imprisonment for the remainder of that person's natural life, and with **fine**:

Provided that such fine shall be **just and reasonable to meet the medical expenses and rehabilitation of the victim:**

Provided further that any fine imposed under this section shall be **paid to the victim**.

[9]376DA. Where a woman under sixteen years of age is raped by one or more persons constituting a group or acting in furtherance of a common intention, each of those persons shall be deemed to have committed the offence of rape and shall be punished with imprisonment for life, which shall mean imprisonment for the remainder of that person's natural life, and with fine:

Provided that such fine shall be **just and reasonable to meet the medical expenses and rehabilitation of the victim**:

Provided further that any fine imposed under this section shall be **paid to the victim**.

[9]376 DB. Where a woman under twelve years of age is raped by one or more persons constituting a group or acting in furtherance of a common intention, each of those persons shall be deemed to have committed the offence of rape and shall be punished with imprisonment for life, which shall mean imprisonment for the remainder of that person's natural life, and with fine, or with death:

Provided that such fine shall be **just and reasonable to meet the medical expenses and rehabilitation of the victim**:

Provided further that any fine imposed under this section shall be **paid to the victim**.

Punishment for repeat offenders-

376E. Whoever has been previously convicted of an offence punishable under section 376 or

section 376A or section 376AB or section 376D or section 376DA or section 376 DB[8a] and is subsequently convicted of an offence punishable under any of the said sections shall be punished with imprisonment for life which shall mean imprisonment for the remainder of that person's natural life, or with death.'.

Sec. 377 of I.P.C Unnatural offences.—Whoever voluntarily has carnal inter-course **against the order of nature** with any **man, woman or animal**, shall be punished with **imprisonment for life**, or with impris-onment of either description for a term which may **extend to ten years**, and shall also be liable to fine.

Explanation.—Penetration is sufficient to constitute the carnal intercourse necessary to the offence described in this section.

"The Criminal Law (Amendment) Act, 2018" suitable amendments were also made in Sec.166A, Sec. 228 A of I.P.C along with Sec. 53-A, Sec. 146 of Indian Evidence Act, Sec. 26, Sec. 154, Sec. 161, Sec. 164, Sec. 173, Sec. 197, Sec. 309, Sec. 327, Sec. 357B, Sec. 357C, Sec. 374, Sec. 377, Sec. 438, Sec. 439 of Cr.P.C and Sec. 42 of Protection of Children from Sexual Offence (POCSO) Act. 2012.

The perusal of the newly inserted provisions in the IPC and the CrPC demonstrates the unambiguous will of the state to create a far more strict regime of punishment for the accused involved in the rape related offences against the women in general and the juvenile victims in particular besides tightening the bail provisions; and laying down shorter periods for the completion of investigation; trial and disposal of appeal against conviction. However, it would have been equally desirable if the disposal of appeal period laid down against conviction

is also made applicable to the appeal against aquittal as well.

The perusal of the above legal provisions related to the offence of rape in its different forms, **shows that commission of the rape** carries very **heavy penalty**, which may extend **upto life imprisonment** or in some extreme case **to death penalty**. It also **inflicts very heavy social and personal cost** to the person accused of the offence, and his family in term of **injury to personal/family reputation, social stigma and economic cost**.

One can imagine how traumatic it would become were the allegations levelled to be established as patently **false** and **motivated**. Therefore, **it is important that while dealing with the deterrent and preventive aspects of the offence of sexual assaults we should also keep in mind the very grave consequences of Doubtful/Motivated Allegations/ Implication of Rape on him personally, socially, psychologically and impact on his family life, in a relatively conservative society like India.**

Analysis of Situation Prevalent in some foreign countries

Studies conducted by different researchers in a number of western contries, like **Schiff** (1975)[10], **Gregory and Lees** (1996)[11] **Temkin** (2002)[12], **Kelly** (2010)[13], **Saunders** (2012)[14], **Wheatcroft, and Walklate**, (2014)[15] and De Zutter etal (2017)[16] have conclusively pointed out towards the existence of a **significant tendency/temptation with the victim(s) to Doubtful/Motivated Allegations/Implication of Rape** of rape in their respective research work. Even **Taylor's Principles and Practice of Medical Jurisprudence (2000)**[17] has clearly mentioned the possibility of false allegation of rape.

In **R V Henry and Manning**[18] - where the court observation also points towards **Doubtful/Motivated Allegations/Implication of Rape**

Ministry of Justice Research Series 20/10, November 2010 **(Government of U.K)**[19] at page 10 of the report under the name and style: **Providing anonymity to those accused of rape: An assessment of evidence,** clearly mentions that **various studies have estimated that 8–11% of rape allegations in England and Wales are false**

Crown Prosecution Service of U.K. Report (2013) referred the case of **R v A.**, [2010] EWCA Crim 2913[20], where it was mentioned that **the need for police and prosecutors fully to investigate and carefully to consider the circumstances in which an allegedly false claim of rape, sexual assault, or domestic violence is made**

The report under the name and style "**The Court of Appeal Criminal Division, Review of the Legal Year 2010 / 2011**"[21] mentioned at page 14- "On 7th July 2011 following a period of consultation, the Crown Prosecution Service issued **Guidance** for prosecutors where a complainant of rape or domestic violence makes a false allegation, retracts an allegation or withdraws a retraction and could **face a charge of perverting the course of justice.**"

In a **Bangladesh** case i.e. **Sobuj** v. **State**[22] where it is observed that "Rape, though a humiliating event in a woman's life and an unlawful intrusion on the privacy and sanctity of a female and commission of rape upon women is on increase yet it is noticed that for ravishment upon a woman, along with real rapists and offenders, **innocent persons are trapped and brought in with ulterior motive.**"More over in **Biplob** v **State**, 6 BLC (2001) 632, **Hossian Shially** v **State**; 8 MLR (HC) 2003 (355) the High Court observed regarding **necessity of corroboration** that: "**In the case of a grown-up and married woman it is always safe to insist upon corroboration.**"[23]

Naznin and Sharmin (2015)[24] reported a case from Bangladesh "**Golam Ahmed v State (2012) 64 DLR (HCD) 93**, the HCD allowed the Appeal of the accused-appellant against the order of the trial court for the offence of rape and he was **discharged.** The Court observed that the manner of occurrence as alleged in the FIR was preposterous and suffered from infirmity and improbability. **It was admitted that they lived together as husband and wife for six years. Sexual intercourse was not an act of the day, but for six years. Such act did not constitute an offence of rape under section 9(1) of the Act**. The Tribunal wrongly framed the charge under section 9(1) of the 2000 Act against the accused appellant, who ought to have been discharged.

Brief Introduction to Indian Scenario

Indian text books like Modi-''A Text Book of Medical Jurisprudence and Toxicology'' (1940)[25], **Parikh's** Text Book of Medical Jurisprudence, Forensic Medicine and Toxicology (2014)[26], **Reddy** (2014)[27] have clearly pointed out about the **possibility of Doubtful/Motivated Allegations/Implication of Rape.**

Scholarly research work of **Venkitakrishnan Usha, Kurien Sunil George** (2003)[28],**Sukul** etal (2009)[29], **Tailar** etal (2010)[30] ,**Naik** etal (2010)[31] , **Bhowmik** etal (2011)[32], Editorial note of **Journal of Indian Academy of Forensic Medicine** (2013)[33], **Tamuli** etal (2013)[34], **Barn and Kumari** (2015)[35] also referred cases of **Doubtful/Motivated Allegations/Implication of Rape**. Even publication from Bangldesh-**Al-Azad** MAS etal (2011)[36] and from Pakistan-**Ayesha Haider** et al. (2014)[37], **Arif M** et al (2014)[38] also referred **Doubtful/Motivated Allegations/Implication of Rape** in their respective research papers.

Mr. K.G. Balakrishnan, the then Chief Justice of India, in his speech at **National Consultation on Access to Justice, Relief and Rehabilitation of Rape Victims,** New Delhi – March 7, 2010[39] had clearly said"................It would be fair to say that in a vast majority of cases; no one in their right mind will make false allegations about having been raped. **In the minute number of cases where such false allegations could have been made, investigators can now rely on physical evidence such as blood, semen and DNA samples among other bodily materials to test the veracity of the allegations** ...."

The incidence of **Doubtful/Motivated Allegations/Implication of Rape** and extent thereof, for obvious practical difficulties in its documentation on an emperical basis, can, at best, be **inferred from the study of cases of this nature, after their final adjudication by he courts of competent judicature**. An attempt has been made, in the succeeding para, by way of **survey** of some such cases to arrive at some reasonable conclusion respecting this very disturbing and disconcerting aspect of sexual assaults (rape) in our country.

Some Notable Indian Judgments indicating existence of tendency/temptation about making false allegation/ doubtful allegation of rape

We have come across several judgments from different High Courts of India and the Hon'ble Supreme Court to indicate that the incidence of **Doubtful/Motivated Allegations/Implication of Rape** is very much in existence in our country. Some of the **observations of the constitutional courts, made/recorded during the delivery of judgment at appeal/revision stage,** are discussed below-

1.   In **Bashir v. State of J&K**, (Jammu & Kashmir)[40] – While acquitting the appellant from the charge of rape his

lordship R.P. Sethi, J. of Jammu and Kashmir High Court at para 9 observed- "9………. The **possibility of the child being utilised by her father to take vengence** against the accused, in relation to the dispute with respect to the watermill and the land cannot be completely ruled out in the instant case………"

2.   In **Ratan Das** v. **State of West Bengal**[41], Division Bench of Avijit Lala and P. K. Deb JJ of Calcutta High court at para 6 had made the following observation that- "6........**False charges of rape are not uncommon** and medical evidence may assist in finding the truth or otherwise of the accusation."

3.   In **Dharm Sai** and anr v. **State of Chhattisgarh**[42], while **acquitting** the appellant his lordship Dilip Raosaheb Deshmukh, J. of Chhattisgarh High Court at Bilaspur at para 14 held-"14. Having thus considered the evidence led by the prosecution in its entirety**, it emerges that the testimony of the prosecutrix is wholly unreliable and not worth placing any reliance**. Due to non-examination of material and independent witnesses Manju, Lalsai, Simon Uraon and Bodidevl, adverse inference is drawn against the prosecution for suppressing the genesis of the case. **Medical evidence and the report of the FSL did not corroborate the testimony of the prosecutrix either in any manner**. The affidavit Ex. D.3 sworn by the prosecutrix clearly renders her **testimony unreliable**. The **previous animosity** of appellant-Lalsai with the father of the prosecutrix is also borne out from the evidence led by the

prosecution. It also emerges that the prosecutrix had lodged the **report two days after the occurrence** which renders the date of incident mentioned in the FIR Ex. P. 1 **doubtful**. The testimony of the prosecutrix is **not corroborated** in any manner by her father Rijhanram who did not state that she had told him about any rape committed upon her by Dharam Sai. The assertion made by the prosecutrix in the FIR about not informing her parents after the occurrence and the non-examination of Manju and Lalsai in the above context renders the prosecution story extremely doubtful**. It cannot be ruled out that the appellants have been falsely implicated for the offence punishable under Section 376(2)(g) IPC**"

4. In **Radhu** v. **State of Madhya Pradesh**[43], Supreme Court of India made the following observation in false charge of rape - "........The courts should, at the same time, bear in mind that **false charges of rape are not uncommon.** There have also been rare instance where a parent has persuaded a gullible or obedient daughter to make a false charge of a rape either to take **revenge** or **extort money** or **to get rid of financial liability**......."

5. **In Rajoo v. State of Madhya Pradesh**[44], the Hon'ble Supreme Court has held that **testimony of the victim of a rape cannot be presumed to be a gospel truth** and observed that false allegations of rape can cause equal distress, humiliation and damage to the accused as well, at para 11, the supreme Court echoed the sentiments as under: - "11. It cannot be lost sight of that rape causes the greatest distress and

humiliation to the victim but **at the same time a false allegation of rape can cause equal distress, humiliation and damage to the accused as well**.........., but **there is no presumption or any basis for assuming that the statement of such a witness is always correct or without any embellishment or exaggeration."**

6. In **Abbas Ahmed Choudhary** v. **State of Assam**[45], the Hon'ble Supreme Court has held that:"....... **there can be no presumption that a prosecutrix would always tell the entire story truthfully**."

7. In **Rai Sandeep @ Deepu** v. **State (NCT of Delhi)**[46], while **acquitting** the appellant from the charge of rape the apex court observed-"24. When we apply the above principles to the case on hand, **we find the prevaricating statements of the prosecutrix herself in the implication of the accused to the alleged offence of gang rape**. There is evidence on record that **there was no injury on the breast or the thighs of the prosecutrix and only a minor abrasion on the right side neck below jaw was noted while according to the prosecutrix's original version, the appellants had forcible sexual intercourse one after the other against her. If that was so, it is hard to believe that there was no other injury on the private parts of the prosecutrix as highlighted in the said decision**. ....**Therefore, in the absence of proper corroboration of the prosecution version to the alleged offence, it will be unsafe to sustain the case of the prosecution**."

8.   In **Prashant Bharti** v. **State of NCT of Delhi**[47], while **acquitting** the appellant from charge of rape Division Bench of Supreme Court of India comprising D.K. Jain, Jagdish Singh Khehar JJ. at para 21 mentioned-"21. …….**the complainant/prosecutrix had herself approached the High Court, with the prayer that the first information lodged by her, be quashed**……**the investigating officer has acknowledged, that he could not find any proof to substantiate the charges**. The charge-sheet had been filed **only on the basis of the statement of the complainant/ prosecutrix** under Section 164 of the Cr.P.C."

9.   In **Jagmohini** v. **State** (**GNCT of Delhi**) & Ors[48], Where while **quashing** the petition of the petitioner G.P.Mittal J. of Delhi High Court observed at para 1- "**1. ....a victim brings to the fore a classic case where false allegations of rape and attempt to carnal intercourse against the order of nature have been levelled by a lady to settle a personal score with her neighbour without caring for the disrepute it brings to a lady and the harassment a person is put to because of all such serious allegations**. ....**story put forth in some of these cases is so illogical and a blatant lie that the society will have to ponder as to what should be the moral punishment to the lady indulging in a false accusation of this nature.**"

10. In **Kuldeep K. Mahato** v. **State of Bihar**[49], while acquitting the appellant from the charge of rape, Division Bench of Supreme Court of India Comprising

G.T. Nanavati, S.P. Kurdukar JJ held-" Then coming to the conviction of the appellant under Section 376 IPC, although both the courts below have held after accepting the evidence of prosecutrix being truthful held that the appellant has forcibly committed the rape, **we are of the opinion that the said finding is unsustainable. The prosecutrix had sufficient opportunity not only to run away from the house at Ramgarh but she could have also taken the help of neighbours from the said village. The medical evidence of Dr. Maya Shankar Thakur - P.W.2 also indicates that there were no injuries on the person of the prosecutrix including her private part. Her entire conduct clearly shows that she was a consenting party to the sexual intercourse and if this be so, the conviction of the appellant under Section 376 IPC cannot be sustained**.........."

11. In **Naravan @ Naran** v. **State of Rajasthan**[50], while **acquitting** the appellant Division Bench of Supreme Court of India comprising S.H. Kapadia, B. Sudershan Reddy JJ observed- "**…...**It is also required to appreciate that she stated in her evidence that even after the accused committed rape on her she sat in the tractor happily .... **The accused even according to the prosecutrix (PW-3), was driving the tractor from Singhpur to Bharkiya crossing through the number of villages. It is not stated by the Prosecutrix (PW-3) that she made any attempt to get off the tractor at any point of time**. On the other hand, it is stated by her that she sat in the tractor happily……. **The evidence of**

the prosecutrix (PW-3) is full of material contradictions. There is **no corroboration of whatsoever** from any of the witnesses more particularly in the evidence of Smt. Tejkanwar (PW-6) who is a material witness. **It is true the evidence of the prosecutrix (PW-3) itself, if acceptable, is sufficient to establish the charge against the accused but her evidence is so artificial which cannot be accepted."**

12.   In **Sadashiv Ramrao Hadbe** v **State of Maharashtra & Anr**.[51] their lordship K.J. Balakrishnan, R.V. Raveendran JJ of Supreme Court of India at para 9 made the following observation- "9…….. **It is also highly improbable that the prosecutrix could not make any noise or get out of the room without being assaulted by the doctor as she was an able bodied person of 20 years of age with ordinary physique.** The absence of injuries on the body improbablises the prosecution version."

13.   In **Raja and Others** v. **State of Karnataka**[52], apex court division bench comprising Pinaki Chandra Ghose and Amitava Roy JJ at para 24 of the order held - "24........ The essence of this verdict which has stood the test of time proclaims that though generally the testimony of a victim of rape or non-consensual physical assault ought to be accepted as true and unblemished, **it would still be subject to judicial scrutiny lest a casual, routine and automatic acceptance thereof results in unwarranted conviction of the person charged**.........."

14.   In **Shri Kunal Mandaliya** v. **The State of Maharashtra**[53], while acquitting the appellant from the charge of rape, Mrs.

Mridula Bhatkar J. Bombay High Court at para 6 of the order observed- "6. ……. **The girl was highly educated and also 25 years old. Therefore, the consent cannot be said to have been obtained by fraud…………, it is a conscious decision to keep sexual relations with a man and thus, to have physical relationship is a matter of choice of both the adult persons, it can hardly be said that the consent was obtained fraudulently**. Therefore, there is no material against the accused to charge him under section 376 of the Indian Penal Code. However, there are other allegations of intimidation, cheating and causing hurt and beating."

15.   In **Vijay Rajendra Yadav** v. **The State of Maharashtra**[54], while granting the bail to appellant , Smt. Sadhana S. Jadav J. of High Court of Bombay at para 7 of the impugned bail order observed-"7. The Court cannot be oblivious of the fact that the **because of such false complaint, the genuine victims of rape and sexual harassment are viewed with jaundiced eye**........". Again at para 9 the order it was mentioned- "9. **This Court had come across not less than four cases where at the stage of bail application of the accused, the prosecutrix would appear in person and submits before the court that the FIR is lodged in a heat of passion or to seek personal vendetta. This would not only be an abuse of process of law but it would be travesty of justice. No citizen can be a allowed to misuse the provisions of law to seek personal vendetta. The Court cannot afford to be a silent spectator and inaction on the part of the Court**

would give a wrong signal to society. It is necessary to issue notice, as it may be a deterrent factor restraining people from initiating false prosecution."

16. In **Gopal Gupta and Another v. State of U.P. And 2 Others**[55], while transferring a case relating to alleged rape of a lady judge in Aligarh, Division Bench of Allahabad High Court Comprising V.K. Shukla and Shashi Kant,JJ observed- "................. Case in hand is one of public importance, inasmuch as on one hand security and safety of judicial officer is involved and on the other hand personal liberty of petitioners is also at stake, as it is being claimed by them, to the top of their voice that they are being framed up by the judicial officer and the theory of rape set up by her is such that no reasonable or prudent man would ever believe the same to be true, and this Court should see and get it investigated as to whether being a judicial officer she is misusing her official position or not by cooking up story of rape being committed on her and as such case in question be transferred from local police to CBI so that clear and truthful picture emerges..............."

17. In **Rohit Chauhan** v. **State (NCT of Delhi)**[56], where Kailash Gambhir J. of Delhi High Court observed at para 14 of the impunged order as under while granting anticipatory bail to the appellant- "14. ....There is a clear demarcation between rape and consensual sex and in cases where such controversies are involved, the court must very cautiously examine the intentions of both the individuals involved and to check if even the girl on the other hand is genuine or

had malafide motives**. Cases like these not only make mockery of the sacred institution of marriage but also inflate the statistics of rape cases which further deprecates our own society.**"

18. In **Rajak Mohammad** v. **State of Himachal Pradesh**[57] while acquitting the appellant division bench of Supreme Court of India comprising Ranjan Gogoi, Navin Sinha and K.M. Joseph, JJ. at para 3 of the judgment had mentioned- "3. Apart from the above, from the evidence of Bimla Devi (P.W.7) it appears that the prosecutrix has remained with the accused appellant for about two days in Kullu in the house of P.W.7 and that there were about 60-70 houses in the village. **The materials on record also indicate that the prosecutrix remained in the company of the accused appellant for about 12 days until she was recovered and that she had freely moved around with the accused appellant in the course of which movement she had come across many people at different points in time. Yet, she did not complain of any criminal act on the part of the accused appellant**."

19. In **Dola @ Dolagobinda Pradhan & Anr**. v. **The State of Odisha**[58], while acquitting the appellant apex court division bench comprising N.V. Ramana, Mohan M. Shantanagoudar JJ. had observed- "22. In our considered opinion, the Trial Court as well as the High Court have convicted the appellants without considering the aforementioned factors in their proper perspective. The testimony of the victim is full of inconsistencies and does not

find support from any other evidence whatsoever. Moreover, the evidence of the informant/victim is inconsistent and self-destructive at different places. It is noticeable that the medical record and the Doctor's evidence do not specify whether there were any signs of forcible sexual intercourse. **It seems that the First Information Report was lodged with false allegations to extract revenge on the appellants, who had uncovered the theft of forest produce by the informant and her husband**. **The High Court has, in our considered opinion, brushed aside the various inconsistencies pointed out by us only on the ground that the victim could not have deposed falsely before the Court**. The High Court has proceeded on the basis of assumptions, conjectures and surmises, inasmuch as such assumptions are not corroborated by any reliable evidence. **The medical evidence does not support the case of the prosecution relating to the offence of rape**. Having regard to the totality of the material on record and on facts and circumstances of this case, it is not possible for this Court to agree with the concurrent conclusions reached by the courts below. At best, it may be said that the accused have committed the offence of hurt, for which they have already undergone a sufficient duration of imprisonment, inasmuch as they have been stated to have undergone two years of imprisonment. Accordingly, the appeal is allowed. The judgments of the Trial Court as well as the High Court are set aside. The appellants are acquitted of the charges levelled against them. They should be released forthwith, if they are not required in any other case."

20. In **Sham Singh** v. **The State of Haryana**[59] while acquitting the appellant apex court division bench comprising N.V. Ramana, Mohan M. Shantanagoudar JJ. of Supreme Court of India had observed – "22. The fact that at the residential house of the appellant, wherein all the inmates of the house including the mother, children, sister and wife of the accused were living, such a brutal offence of rape could not have been executed without attracting the attention of anyone at that point in time, would make the prosecution version seriously improbable. We are of the view that the doubtful and suspicious nature of the evidence sought to be relied upon to substantiate the circumstances in this case itself suffers from serious infirmities and lack of legal credibility to merit acceptance in the hands of the court of law. **Having regard to the material on record, we find that there is every possibility of false implication of the accused in this matter to take revenge against the family of the accused because of the long-standing disputes inter se between the two families**."

21. In **Dattatray @ Kashinath Babaso Khatal** v. **The State of Maharashtra**[60], while acquitting the appellant his lordship A. M. Badar J. of Bombay High Court at para 19 had mentioned-"19. DW1 Lakhan Khatal was subjected to the cross examination. The prosecution has not at all disputed his version regarding payment of Rs.2 lakh by him to the father of the prosecutrix/ PW1 in the year 2010 and further demand of Rs.5 lakh as balance amount by the father of the prosecutrix/PW1 from

DW1 Lakhan Khatal for settling the matter. Entire evidence of DW1 Lakhan Khatal regarding demand of huge amount of Rs.7 lakh by father of the prosecutrix/PW1, payment of Rs.2 lakh by him to the father of the prosecutrix/PW1 and further demand of balance amount of Rs.5 lakh by the father of the prosecutrix/PW1 from DW1 Lakhan Khatal has gone unchallenged and as such, there is no reason to disbelieve this version of DW1 Lakhan Khatal. **The prosecution has not disputed meeting of DW1 Lakhan Khatal with father of the prosecutrix/PW1 named Nana at Village Andhori and happenings in that meeting as disclosed by DW1 Lakhan Khatal.** What was suggested to DW1 Lakhan Khatal in his cross examination by the prosecution is to the effect that taking undue advantage of illness of father of the prosecutrix / PW1, DW1 Lakhan Khatal had videographed entire proceedings of the meeting. In other words, the prosecution is accepting the meeting between the prosecuting party and the son of the appellant/ accused as well as demand of money by the prosecuting party from DW1 Lakhan Khatal for settling the matter and for securing acquittal of the appellant/ accused. Receipt of amount of Rs.2 lakh by father of the prosecutrix/PW1 is also undisputed. **This unchallenged evidence of the defence witness probabilizes the defence of the appellant/accused that he was honey trapped by the prosecutrix/ PW1 in order to extract money from him. Reasonable doubt lurks in the judicial mind as to whether the prosecutrix/ PW1 is a witness of truth or whether she was using her**

womanhood for falsely implicating the appellant/accused in the crime in question.

22. In **Ganga Prasad Mahto** v. **State of Bihar & Anr**.[61], while acquitting the appellant from the charge of rape, apex court bench comprising Abhay Manohar Sapre and Dinesh Maheshwari JJ. at para 11 had mentioned- "11......... Fifth, it had also come in evidence that the **prosecutrix was in habit of implicating all the persons by making wild allegations of such nature against those with whom she or/and her husband were having any kind of disputes**............."

23. In **State by Konanur Police v. K.M. Lokesh**[62], while rejecting the appeal of the appellant their lordship Mohan M. Shantanagoudar and Budihal R.B., JJ. of Karnataka High Court observed-" 15. Having regard to the aforementioned facts and circumstances, it is clear that the entire case vested on the evidence of P.W. 1-prosecutrix. We have already mentioned supra as to why the evidence of P.W. 1 needs corroboration in the matter on hand. **It cannot be lost sight that rape causes greatest distress and humiliation to the victim but at the same time a false allegation of rape can cause equally distress, humiliation and damage to the accused as well. Accused must also be protected against the possibility of false implication**. We are conscious of the principle that an injured witness/ victim/prosecutrix who suffered the incident ordinarily would not lie as to the actual assailant/accused, **but there is no presumption or any basis for assuming that the statement of such witness is always correct or without**

any embellishment or exaggeration."

24.   In **State by Revoor Police v. Dattappa @ Dattu**[63] while **upholding acquittal** of the respondent by trial court in rape case, division bench of Karnataka High Court comprising M.F. Saldanha & K. Ramanna, JJ. mentioned-" 3. We are not very much impressed by the last argument because some suggestion was made to Mapamma that her sister is a Devadasi, that she and her sister had left their respective husbands and furthermore that the villagers have ostracised them, but in our considered view, **what really goes against P.W.7 is the fact that she was not a child, she was a 20 year old adult woman and that the accused could have physically carryed her to an open cowshed in broad daylight in the middle of the village and raped her against her wishes is something that is highly unlikely**. If the incident has taken place and if Mapamma was a consenting party then there can be no question of an offence but if on the other hand, the incident has taken place against her wishes the very least that could have been expected would have been a level of resistance which would have left atleast some minor injuries on the accused and on the victim. Admittedly no injuries of any type have occurred and the telltale circumstance is that even the clothes of the victim have neither been damaged nor are they stained. Also, the police have not seized a single material object and in totality, therefore, we find that it would be virtually impossible to rely on the evidence of P.W.7 because **when this evidence is tested from any of the**

obvious angles serious doubts arise as to whether at all the incident has taken place. …………"

25.   In **Lukba Rime and Etc** v. **State of Arunachal Pradesh**[87] - While acquitting all the appellant except Gumto Loyi, Division Bench of Guwahati High Court comprising I.A. Ansari and P.K. Musahary, JJ. held-"24……There is no evidence of any animosity between the accused persons and the victims themselves or their parents; or between the accused persons and Mrs. Yomcha, Secretary of the Women Welfare Organization over any matter. **It is in the evidence that the victim girls did not report the incident immediately after the incident to their parents or anybody but the victim girls reported the matter to the police at the instance of the aforesaid Mrs. Yomcha and she remained herself aloof by not appearing before the learned trial court. The prosecution has no explanation why an important witness like Mrs. Yomcha has not been produced as witness to prove the case against the accused persons. In such circumstances, an adverse presumption can be drawn to the effect that for the sake of publicity and gaining cheap popularity amongst the people of the locality, the aforesaid Women Welfare activist took initiative for filing a false or exaggerated complaint by the aforesaid girls. All these factors cast serious doubt on the prosecution case and we do entertain serious doubt that Mrs. Yomcha, scribed the FIR and got the same filed without intention other than bona fide**."

26. In **Vinish @ Vinni** v. **State of U.P.**[88], while acquitting the appellant from the charge of rape filed against him, Ranjana Pandya,J. of Allahabad High Court at para 29 held- "29. Thus, what has been stated and discussed above, **I conclude that the prosecution case is a bundle of false allegations and improbable facts**, **due to which the learned trial court misled itself and has incorrectly convicted the accused**, **conviction cannot be sustained** in the eye of law, as such the accused is entitled to be acquitted and the appeal is liable to be allowed."

27. In **Mansoor Ali Khan** v. **State**[66], while quashing the charge u/s. 376 of I.P.C against the appellant at para 8 of the impugned judgment Madras High Court observed-" 8......... **On a perusal of the contemporaneous materials, I am of the considered view that PW-1 was moving in with the appellant of her own volition and it is hard to believe that she had consented to sexual intimacy with him only as a consequence of her belief, based on his promise that they would get married in due course. Hence, it can be safely concluded that the case of the appellant would not fall under Section 376 IPC. (Fifthly)**.......... It is the assertion and specific case of the appellant that only PW-1 compelled him to have such relationship with her. The whole prosecution case rests on the evidence of PW-1 and as could be seen from the various aspects pointed out above in respect of her evidence, it is not safe to sustain the conviction under Section 376 IPC against the appellant. Other prosecution witnesses are not of much use except to speak about the

DNA test conducted to substantiate that the child born to PW-1 was through the appellant. In such circumstances, **I am of the considered view that the offence under Section 376 is not made out."**

28. In **Shivashankar @ Shiva** v. **State of Karnataka**[67], Division Bench of Supreme Court of India comprising S. A. Bobde and L. Nageswara Rao while allowing the appeal observed- "8.........**It is, however, difficult to hold sexual intercourse in the course of a relationship which has continued for eight years, as 'rape' especially in the face of the complainant's own allegation that they lived together as man and wife**."

29. In **Dr. Dhruvaram Murlidhar Sonar** v. **State of Maharashtra**[68], while quashing the charge of rape filled against the petitioner apex court division bench, comprising A.K. Sikri and S. Abdul Nazeer, JJ. at para had observed-"21. In the instant case, it is an admitted position that the appellant was serving as a Medical Officer in the Primary Health Centre and the complainant was working as an Assistant Nurse in the same health centre and that she is a widow. It was alleged by her that the appellant informed her that he is a married man and that he has differences with his wife. Admittedly, they belong to different communities. It is also alleged that the accused/appellant needed a month's time to get their marriage registered. The complainant further states that she had fallen in love with the appellant and that she needed a companion as she was a widow. She has specifically stated that "as I was also

a widow and I was also in need of a companion, I agreed to his proposal and since then we had been having love affair and accordingly we started residing together. We used to reside sometimes at my home whereas some time at his home." Thus, they were living together, sometimes at her house and sometimes at the residence of the appellant. They were in a relationship with each other for quite some time and enjoyed each other's company. **It is also clear that they had been living as such for quite some time together. When she came to know that the appellant had married some other woman, she lodged the complaint. It is not her case that the complainant has forcibly raped her**. She had taken a conscious decision after active application of mind to the things that had happened. It is not a case of a passive submission in the face of any psychological pressure exerted and there was a **tacit consent** and the tacit consent given by her was **not the result of a misconception created in her mind.** We are of the view that, even if the allegations made in the complaint are taken at their face value and accepted in their entirety, they do not make out a case against the appellant. We are also of the view that since complainant has failed to prima facie show the commission of rape, the complaint registered under Section 376(2)(b) cannot be sustained."

30. In **Sujatha** v. **State of Kerala and Ors**[69], while dismissing the petition of the petitioner (i.e. Sujatha) at para 9 of the order held-"9. The allegation of sexual abuse of child is a matter of very serious concern and one affecting public conscience. POCSO Act provides for

very deterrent punishment to the guilty. Hence, a false case of sexual abuse on a child has also to be treated very seriously and any attempt to implicate a person falsely in an offence under the provisions of POCSO Act has also to be seriously dealt with. Any attempt to misuse the provisions of POCSO Act to settle scores with the opponent need to be nipped in the bud. Legislature in its wisdom has incorporated section 22 in POCSO Act to meet such eventualities. I am satisfied that, this is a case in which invocation of section 22 is liable to be considered."

The survey of cases, alluded to above, covering a fairly long period, across various parts of our country and beyond, has shown that in our country also it cannot be ruled out with reasonable certainty that Doubtful/Motivated Allegations/ Implication of Rape, especially by an adult and grown up woman, could as well be a false/ doubtful allegation actuated by a variety of reasons like vendetta, economic exploitation, feeling of having been cheated, to name a few. Hence the court must not be oblivious of its sacred obligation and duty to insist on corroboration before recording a verdict of guilty in such cases where the evidence of prosecutrix never inspire confidence of the judicial authority.

Analysis of possible back ground in Doubtful/Motivated Allegations/ Implication of Rape

After careful analysis of different cases of **false allegation** of rape/ **doubtful allegation** of rape as well as **acquittal** in rape cases the followings **important triggers** emerge as some of the most

plausible precipitating factors actuating the false allegation of rape/ doubtful allegation of rape against the unfortunate persons.

A.   When the prosecutrix is suffering from frustration and anger-

1.   V. K. Tulsian v. State[70] (Para 4)

2.   Rohit Chauhan v. State NCT of Delh[56] (Para 14)

B.   When Complainant is a tutored witness by the parents/interested persons:-

1.   Chamaru Ram v. State of H.P.[71] (Para 28 and 35)

2.   State of H.P. v. Brij Mohan[72] (Para 11)

C.   When posecutrix is involved in an unfair activity-

1.   Rajoo & Ors. v. State of M.P[44] (Para 11 and 15)

2.   Rajkumar and Anr. v. State of M.P.[73] (Para 5 and 6)

D.   When there was a consensual sexual intercourse between the prosecutrix and the so called accused, husband of the prosecutrix suddenly reached the house and found the prosecutrix was having sexual intercourse with the so called accused- the prosecutrix lodged a complaint against the appellant- Panchshil v. State of Maharashtra & Anr.[74] (Para 16)

E.   When the relations between the prosecutrix and the husband and in laws are strained

1.   Ganga Sharan @ Chotu and Anr. v. State (NCT of Delhi)[75] (Para 10)

2.   **Husband was impotent-Non consumption of marriage- F.I.R** lodged against husband and in-laws u/s. 498- A/ 406/376/506/ 354/34 I.P.C for the purpose to obtain divorce- State v. Hoshiar Singh s/o Lala Ram and Other[76] (Para 11)

F.   When the act of sexual intercourse of prosecutrix was observed by the parents-Ifran and Others v. State[77] (Para 10)

G.   When prosecutrix wants to restrain the police officer from arresting her husband against whom there was a charge of murder-Sarat Chandra Rath v. Malti Tandi & Another[78] (Para 31)

H.   Existence of legal battle between parents for inheritance of property and the complainant was influenced by her mother to lodge false allegation against her father-

1.   Puran Chand Sharma v. State (Govt. of NCT New Delhi)[79] (Para 15)

2.   Atender Yadav v. State[80] (Para 41)

I.   Refusal to marry

1.   Manesh Madhusudan Kotiyan v. The State of Maharastra and Anr.[81] (Para 8)

2.   Nandan Sadanand Bendarkar v. The State of Maharashtra[82] (Para 17)

3.   Sunil Kashinath Shelke v. The State of Maharashtra[83](Para 8)

J.   When the accused and the prosecutrix were in deep love and due to deep love sexual intercourse for several times occurs hence it cannot be said that the consent given by prosecutrix was on account of any

promise of marriage made by the appellant - Yogesh v. State[84] (Para 21)

K.   Pregnancy during love affair and disinclination of the accused to marry the prosectrix

1.   Sajid @ Salman v. State[85] (Para 16)

2.   Jaya Kumari Malawat v. Bhawani Singh& Anr.[86]

3.   Sujit Ranjan v.State[87] (Para 17)

4.   Sarimoni Mahto v. Amulya Mahto and Anr[88] (Para 6)

L.   When prosecutrix wants to extort money from the so called accused-Omi @ Om Prakash(In Jail) v. State of U.P.[89] (Para 25)

M.   Exertion of pressure by close relatives to level false accusations and then subsequent retraction thereof-

1.   Mansoor Ali Khan v. State[66] (Para 8)

2.   Peelaram and Another v. State of Madhya Pradesh[90] (Para 8)

N.   Complainant might have relationship with different males and she wants to end her relationship with the so called accused-Rohit Bansal v. State[91] (Para 44)

O.   There should be a land-related dispute between the family of the complainant and the so called accused or his family-

1.   Ashok Narang v. State[92](Para 52)

2.   Jagmohini v. State (GNCT of Delhi) & Ors.[48] (Para 5)

3.   Chamaru Ram v. State of H.P.[71] (Para 27)

P.   When the prosecutrix is strongly determined to fix false allegation to avenge ill treatment by the accused persons -State v. Vikash Tyagi and ors[93] (Para 10)

Q.   When the parents of the prosecutrix are determined to ruin the life of the so called accused resposible for their daughter's initiation into drinking- State v. Prashant Sablani and ors[94] (Para 93)

R.   When prosecutrix is habitual of levelling false allegations of rape against persons-

1.   Rajpal @ Raj v. State of Punjab[95]

2.   State v. Rajeev Kumar[96] (Para 25 and 26)

S.   As an instrument for recovery of loan- Vijay Rajendra Yadav v. The State of Maharashtra[54] (Para 4)

T.   When there is problem in live-in relationship

1.   Alok Kumar v. State & Anr.[97] (Para 8 and 9)

2.   Manoj Bajpai v. State of Delhi[98]

3.   Md. Kalim Ansari @ Md. Kalimulla Ansari v. The State of Jharkhand and Another[99] (Para 8)

4.   Tilak Raj v. State of Himachal Pradesh[100] (Para 20)

5.   Shivashankar @ Shiva v. State of Karnataka[67] (Para 8)

6.   Dr. Dhruvaram Murlidhar Sonar v. State of Maharashtra[68] (Para 21)

U.   Ulterior motive of wife to file a case of rape of daughter by husband with previous history of filing case u/s. 489 A of I.P.C along with claim of

maintenance against husband – The State of Maharashtra v. Anwar Shamim Shaikh[101] (Para 7)

V.   **As an instrument not to repay loan-** Vineet Kumar v. State of U.P.[102] (Para 34)

W.   **When prosecutrix was instigated by Staff/ (s) of NGO or like organization-** State v. Manoj Kumar Sharma[103] (Para 11)

X.   **When there is a pending dispute between the parents for custody of a minor child**- Suhara v. Muhammed Jaleel[104] (Para 28)

Y.   **Involvement of Organized gangs to extort money or any other valuable items in the pretext of false allegation of rape-**

1.   Vishal Nagpal v. State of Punjab[105]

2.   Sayed Moinul Haq v. State of Rajasthan[106]

In the foregoing cases an attempt has been made to list out various **motives** that have actually come to notice, to actuate the prosectrix to level accusation of rape that are **either fabricated or doubtful**. These cases are only illustrative in nature. We cannot rule out many more reasons operating with the so called victims to frame the accused in pursuit of their **motives not grounded on truth and merit**. It only strengthens the observation that the phenomenon of making false allegations of rape, and probable reasons thereof, is very much in existence now in our society.

Imposition of Fine for False Complain of rape to police- In **State of Manipur** v **Okram Birjit Singh**[107] while acquitting the appellant from the charge of rape Ld. Addl. Sessions Judge, (FTC), CAW Manipur A. Noutuneshwari

Devi had imposed 1,00,000 rupees fine on the prosecutrix for falsified complaint to police.

The Legal Provisions related to making false allegation against others for their alleged involvement into offences

Our survey of a good number of cases actually decided by our judiciary conclusively proves that the malaise of levelling **Doubtful/Motivated Allegations/Implication** of rape by the so called victims is no longer unheard in our country. The details of the cases discussed in the foregoing para also suggest that this unhealthy and unethical tendency has assumed significant proportion in our country, **courtesy all-round decline in public and private morality in our society, when the findings of Bharwada Bhoginbhai Hirjibhai case[2] are compared with the cases shown in our survey.[40-107] It will be quite fair that while showing utmost sensitivity and concern against any kind of sexual offences in our country it will also be equally necessary to prevent misuse/ abuse of the process of law to demolish the reputation of individual by levelling motivated/false charges of rape on the part of victims.** Indian Penal Code, 1860 has visualized the probility of leveling false allegation of commiting crime against innocent persons, actuated by unlawful and unethical motives, way back in 1860 when the IPC was drafted and brought on the statute book. Therfore, some Legal provisions for false allegation for involvement into an offence were included in the IPC1860 generally. It will be useful to have a look at the following provisions of the IPC which deal with this subject-

(1) False implication of rape can be prosecuted u/s. 191 of I.P.C (Definition) and punishment defined in u/s. 193 of I.P.C, (2) Sec. 191 of I.P.C- Giving false evidence, (3) Prosecution u/s. 182 of I.P.C, (4) Section 211 of I.P.C- False charge of offence made

with intent to injure, (5) Section 388 of I.P.C.- Extortion by threat of accusation of an offence punishable with death or imprisonment for life, etc.. (6) Section 389 of I.P.C- Putting person in fear of accusation of offence, in order to commit extortion., (7) Section 499 of I.P.C- Defamation, (8) Section 500 of I.P.C- Punishment for defamation, (9) Section 199 of Cr. P. C- Prosecution for defamation., (10) Section 340 of Cr. P.C- Procedure in cases mentioned in section 195, (11) Section 344 of Cr. P.C- Summary procedure for trial for giving false evidence.

Observations of our Apex Court in some illustrative cases on perjury are given below-

a. **Chajoo Ram v. Radhey Shyam & Anr.**[108] Supreme Court held: "7.The prosecution for perjury should be sanctioned by courts only in those cases where the perjury appears to be **deliberate and conscious** and the conviction is reasonably probable or likely....."

b. In **Swaran Singh v. State of Punjab**[109] where apex court division bench comprising D.P. Wadhwa and Ruma Pal, JJ. Observed -"33.....**Perjury has also become a way of life in the law Courts**. A trial Judge knows that the witness is telling a lie and is going back on his previous statements, yet he does not wish to punish him or even file a complaint against him. **He is required to sign the complaint himself which deters him from filing the complaint**. Perhaps law **needs amendment** to clause (b)

of Section 340(3) of the Code of Criminal Procedure in this respect as the High Court can direct any officer to file a complaint. To get rid of the evil of perjury, the Court should resort to the use of the provisions of law as contained in Chapter XXVI of the Code of Criminal Procedure."

c. **Iqbal Singh Marwah & Anr**. v. **Meenakshi Marwah & Anr.**[110]," ..**This expediency will normally be judged by the court by weighing not the magnitude of injury suffered by the person affected by such forgery or forged document, but having regard to the effect or impact, such commission of offence has upon administration of justice..**"

d. **In Mishrilal v. State of M.P.**[111] **apex court at para 6 held that "…Whenever the witness speaks falsehood in the court, and it is proved satisfactorily, the court should take a serious action against such witnesses."**

Examples of judicial order for perjury in false allegation of rape can be referred from the following cases- (1) Rajpal @ Raj v. State of Punjab[95], (2) State v. Rajeev Kumar[96] (Para 28)", (3) State v. Vikash Tyagi & Others[93] (Para 18), (4) Mahila Vinod Kumari v. State of M.P[112] (Para 10), (5) State (Govt. of NCT of Delhi) v. Jitender Kumar & Anr[113] (Para 50). Apart from judicial order for perjury there is also instance that police had filled report for prosecution of prosecutrix u/s. 182 of Cr. P. C. for lodging false report.[102]

Presumption of innocence

It will be pertinent here to draw attention to the **principle of presumption of innocence** in our criminal jurisprudence against the accused till held guilty by the court. It has been a settled principle. However it will be useful to refer to the following observation of the apex court in a recent judgment-

In **Kali Ram** v. **State of Himachal Pradesh**[114], where division bench of Supreme Court of India comprising H. R. Khanna, Hans Raj, T Alagirisamy, Sarkaria and Ranjit Singh JJ held-"25........ **Another golden thread which runs through the web of the administration of justice in criminal cases is that if two views are possible on the evidence adduced in the case, one pointing to the guilt of the accused and the other to his innocence, the view which is favourable to the accused should be adopted** ....".In **Shard Birdhichand Sarda** v. **State of Maharashtra**[115], Where apex court of India held that merely on suspicion and circumstances one cannot be held guilty. In **Babu** v. **State of Kerala**[116] , where division bench of Supreme Court of India comprising P. Sathasivam, B.S. Chauhan JJ at para 27 of the impugned judgment held that- "27. **Every accused is presumed to be innocent unless the guilt is proved. The presumption of innocence is a human right**......". Presumption of innocence of accused starts in the trial court and continues even up to the appellate stage [117, 118]. Persons who achieved acquittal in sessions trial are having double presumption of innocence because *Firstly*, the presumption of innocence available to him under the fundamental principle of criminal jurisprudence that every person should be presumed to be innocent unless he is proved to be guilty by a competent court of law. *Secondly*, the accused having secured an acquittal, the presumption of his innocence is certainly not weakened but reinforced, reaffirmed and strengthened by the trial Court. [119, 120]

Prosecution of the I.O, who conducted the malafied investigation-

In **Jamuna Chaudhary** & Ors v. **State of Bihar**[121] wherein it had been held by the apex court in para No.11 as-"11. The **duty of the Investigating Officer** is not merely to bolster up a prosecution case with such evidence as may enable the Court to record a conviction **but to bring out the real unvarnished truth**..."

In **Perumal** v. **Janaki**[122] where Honourable Supreme Court of India **ruled that Police officers and officials would be liable for prosecution if a charge sheet is filed against a person despite knowing his innocence**. In this case bench of Shri P Sathasivam C.J.I and Shri J Chelameswar J. said that police could no longer take shelter behind the practice that in a case relating to alleged sexual assault or rape, they had no option but to file chargesheet against the man accused of the crime even if there was evidence to the contrary.

In **State of Gujarat** v. **Kishanbhai Etc**.[123] where division bench of the Apex court comprising C. K. Prasad and J. S. Khehar JJ. Observed - "**20.** Every acquittal should be understood as a failure of the justice delivery system, in serving the cause of justice. Likewise, every acquittal should ordinarily lead to the inference, that an innocent person was wrongfully prosecuted......." In this case division bench had directed the Secretaries of Home Department of all the States & U.T.'s **to constitute committee of senior officers of investigating and prosecuting agencies to examine each acquittal and record reasons in cases of heinous crime and departmental action to be taken against erring officials, further more direction given to frame training programmes with such examined cases for the officials of investigation and prosecution agency. It is one of the path breaking judgment of Hon'ble Supreme Court that needs to be implemented at the**

field level to enhance the quality of investigation and prosecution alike.

In **Suresh Atmaram Indore and Ors** v. **State of Maharashtra**[124], Division Bench of Bombay High Court at Nagpur Bench comprising B. P. Dharmadhikari and A. S. Chandurkar JJ relying on the direction by the apex court in **State of Gujarat** v. **Kishanbhai Etc**[123] directed the following while acquitting all the appellants -"24... Here we find a case for ordering an inquiry under Discipline and Appeal Rules as also to examine feasibility of filling proceeding under section 201 of Indian Penal Code. Such an inquiry be completed within 6 months against all the officers, whether in service or retired, who participated in the investigation and report thereof be filled with the registry of this Court………"

In **Pidathala Satyam Babu** v. **State of Andhra Pradesh**[125], while **acquitting** the appellant from the charge of rape and murder, division bench of Telengana and Andhra Pradesh High Court, comprising C. V. Nagarjuna Reddy and M. S. K. Jaiswal, JJ.relied on the Apex court judgment of **State of Gujarat** v. **Kishanbhai Etc**[123] and awarded compensation amounting to Rs. 1,00,000/- to the appellant and further directed the respondent as-

"94. There may not be perhaps a better case than the present one for being referred to the Apex Committee for taking action against all the erring investigating/prosecuting officials/officers, for not identifying the real culprits and prosecuting an innocent person and getting him convicted. The State is accordingly directed to refer the matter to the Apex Committee."

Trial by Media

It is a true that in any sensitive case media plays a crucial role which is known as trial by media, such kind of role not only affects the reputation of the person concerned as well as amounting

to interfering with the administration of justice. and therefore, will amount to criminal contempt. Therefore the law enforcing agency and prosecution agency need to be cautious regarding trial by media. Some Judicial observation from constitutional court's appended below in this regard-

1. Bijoyananda Patnaik v. Balakrushna Kar And Anr.[126]

2. Rao Harnarain v. Gumori Ram[127]

3. Saibal Kumar Gupta v. B. K. Sen[128]

4. Harijai Singh v. Vijay Kumar[129]

5. Anukul Chandra Pradhan v. Union of India[130]

6. State of Maharashtra v. Rajendra Jawanmal Gandhi[131]

7. M.P. Lohia v. State of W.B. & Anr[132]

8. M.S. Ravi & Ors.[133]

9. R.K. Anand v. Registrar[134]

10. Sidhartha Vashisht v. State (NCT of Delhi)[135]

11. Naveen Jindal v. Zee Media Corporation Ltd.[136]

While reporting any incident media must adhere to the following guide lines imposed by Press Council of India for Trial by Media, which can be read as-

"The media and judiciary are two vital pillars of democracy and natural allies; one compliments the other towards the goal of a successful democracy. Measures which are necessary for due process of law need to take precedence over freedom of speech. In a conflict between fair trial and freedom of speech, fair trial has to necessarily prevail because any compromise of fair trial for an accused will cause immense harm and defeat justice delivery system. **Thus, media persons should be duly trained and imparted basic knowledge about functioning of courts and processes of law**.

Some guidelines recommended by Press Council of India, to be observed by the media community are given below[137]

1.   An accused is entitled to the **privilege of presumption of being innocent** till guilt is pronounced by the Court.

2.   The media reports should **not induce the general public to believe in the complicity of the person indicted** as such kind of action brings undue pressure on the course of fair investigation by the police.

3.   Publishing information based on **gossip about the line of investigation** by the official agencies on the crime committed gives such publicity to the incident that may facilitate the person who indeed committed the crime to move to a safer place.

4.   It is **not always advisable to vigorously report crime related issues on a day to day basis** nor to comment on supposed evidence of the crime without ascertaining the factual matrix.

5.   While media's reporting at the investigation stage in a criminal case may ensure a speedy and fair investigation, disclosure of confidential information may also **hamper or prejudice investigation**. There cannot, therefore, be an **unrestricted access to all the details of the investigation**.

6.   Victim, Witnesses, Suspects and accused should not be given **excessive publicity as its amounts to invasion of their privacy rights.**

7.   **Identification of witnesses by the newspapers**/media **endangers** them to come under pressure from both, the accused or his associates as well as investigative agencies. Thus, media should not identify the witnesses as they may turn hostile succumbing to the pressure.

8.   The **suspect's picture should not be shown as it may create a problem during 'identification parades'** conducted under the Code of Criminal Procedure for identifying the accused.

9.   The **media is not expected to conduct its own parallel trial** or foretell the decision putting **undue pressure on the judge**, the jury or the witnesses or prejudice a party to the proceedings.

10. The reporting on post trial/hearing often consists of reporting on the decision handed down. But when there is a time lag between the conclusion of the proceedings and the decision, **the comments on the concluded proceedings, including discussion on evidence and/or arguments, aimed at influencing the forthcoming decision must be avoided.**

11. Media having reported an initial trial is advised to follow up the story with publication of final outcome by the court, whenever applicable."

Legislative thinking on the tendency to level false allegation of rape

In a parliamentary proceeding in **Rajya Sabha**, while giving an answer to the question of Ld. Parliamentarian Shri. **Mansukh L Mandaviya** on 11th March 2015[138], honourable Minister of State, Home Affairs Sri Haribhai Parthibhai Chaudhury confirmed that the Govt. is aware **that several courts in the country have in last few years taken cognizance of the rising trend of cases of false allegation of rape.** The Minister also said that-**"the victim of false**

case can also evoke Section 182 of Indian Penal Code (False information with intent to cause public servant to use his lawful power to the injury of another person) which provides for imprisonment for a term which may extend to six months or with fine or both". Regarding false allegation of rape was also raised in Lok Sabha also by Ld. Parliamentarians Shrimati Darshana Vikram Jardosh and Shri Nandi Yellaiah , through unstarred question no- 710in 2016[139]. Even in 2017, through **Unstarred Q. No-4160, Ld. Parliamentarian Shrimati Darshana Vikram Jardosh** of Lok Sabha raised the matter of false allegation of rape[140].

Crime data:

According to National Crimes Record Bureau (NCRB), Ministry of Home Affairs, Govt. of India in their publication Crimes in India had provided the following statistics relating to no. of registration of rape in India from 2010-2016-

Table 1: No. of cases registered u/s. 376 and Conviction rate (2010-2016)

Year	No. cases registered u/s. 376 of I.P.C	Conviction Rate
2010[141]	22,172	26.6
2011[142]	24,206	26.4
2012[143]	24,923	24
2013[144]	33,707	27.1
2014[145]	36,735	28
2015[146]	34,651	29.4
2016	38,947[147]	25.5[148]

Table 2: Disposal of Rape cases by Police (2012- 2016)

Year	A	No. Of Cases In Which					
		B	Investigation was Completed				
			C	D	E		
2012[149]	0	60	**1833**	991	21565		
2013[150]	2	10	**2375**	1375	28755		
–	F	G	H	I	J	K	
2014[151]	9	155	**2536**	**768**	23	30840	1423
2015[152]	14	152	**2624**	**505**	30	30001	1231
2016[153]	6	129	**2839**	**249**	66	33628	1474*

A= Cases With- drawn By Govt., B= Investigation was Refused/ Not Investigated, C= Charge Found False / Mistake of Fact or Law Etc., D = Final Report True Submitted, E = Charge Sheets Submitted, F = No. of Cases With drawn by the Govt. during Investigation,G = Cases Transferred to Other Police Station/ Magistrate, H = Cases in which FR Submitted as False, I = Cases in FR as mistake of Fact or of Law Submitted, J = Cases in FR as Non - Cognizable Submitted, K = Cases in which Charge sheets were Submitted, L = Cases in

which Charge Sheets were not laid but FR as True Submitted.

* = Final Report True but insufficient Evidence

Table 3: Relationship between Offender and Victim (2012- 2016)

Year	No. of Cases Where Victim Knows the Offender								Total Known Number
	A^+		A^{++}		A^-		$A^{//}$		
2012[154]	393		1585		8484		14008		24470
2013[155]	539		2315		10782		18171		31807
2014[156]	A^1	A^2	A^3		A^4		A^5	A^6	32187
	674	966	2217		8344		618	19638	
2015[157]	A	B	C	D	E	F	G	H	33098
	488	891	1788	9508	557	705	**7655**	11506	
2016[158]	630	1087	2174	10520	600	557	**10068**	11223	36859

A^+= Parents / Close Family Members, A^{++}= Relatives, A^-= Neighbors, $A^{//}$=Other Known Persons, A^1= Grand Father/ Father/ Brother/ Son etc, A^2= Close Family Relatives (Other than Grand Father/ Father/ Brother/ Son etc), A^3 = Relatives (Other than Grand Father/ Father/ Brother/ Son etc & Close Family Relatives), A^4= Neighbors, A^5 = Employers or Co- Workers, A^6 = Other Known Persons, A= Grand Father/ Father/ Brother/ Son/etc, B= Close Family Members (Other than Grand Father/ Father/ Brother/ Son/etc), C= Relatives (Other than Grand Father/ Father/ Brother/ Son/etc & Close Family members), D= Neighbours, E= Employer / Co-Workers, F= Live In Partner/ Husband (Separated /Ex), G= Known Persons on Promise to Marry the Victim, H= Other Known Persons,

Table 4: Age wise distribution of the victim of Rape (2012- 2016)

Age group	A	B	C	D	E	F	–	–	–
2012[159]	66 (I/) + 985 (O/)= 1051	99 (I/) + 1975 (O/) = 2074	116 (I/) + 5841 (O/) = 5957	83 (I/) + 12511 (O/) = **12594**	27 (I/) + 3160 (O/) = 3187	5 (I/) + 130 (O/) = 135	Total No. of Incest Victim= 396 Total No. of Victim of Rape Case Other Than Incest= 24915		
2013[160]	107 (I/) + 1477 (O/) = 1584	135 (I/) + 2708 (O/)= 2843	151 (I/) + 8726 (O/)= 8877	117 (I/) + 15439 (O/)= **15556**	36 (I/) + 4612 (O/)= 4648	2 (I/) + 254 (O/)= 256	Total No. of Incest Victim= 548 Total No. of Victim of Rape Case Other Than Incest= 33216		

–	G	H	I	J	K	L	M	N	–
2014[161]	524	1407	5424	6747	**16317**	5782	683	84	Total Minor Rape Victim = 14102 Total Major Rape Victim = 22866
2015[162]	451	1151	4244	5547	**16966**	5677	637	98	Total Minor Rape Victim = 11393 Total Major Rape Victim = 23378
2016[163]	520	1596	6091	8656	**16462**	5192	494	57	Total Minor Rape Victim = 16863 Total Major Rape Victim = 22205

A = Upto 10 yrs, B = 10- 14 yrs, C = 14- 18 yrs, D = 18-30 yrs, E = 30-50 yrs, F = 50 yrs above, G = Below 6 years, H = 6 yrs & Above – Below 12 years, I = 12 yrs & Above – Below 16 yrs, J = 16 yrs & Above- Below 18 years, K = 18 yrs & Above – Below 30 years , L = 30 yrs & Above – Below 45 years , M = 45 yrs & Above – Below 60 Years, N = 60 yrs & Above , I$^/$= Incest, O$^/$= Other,

Table 5: A comparative chart of data with respect to disposal of cases under Rape by the courts (2012 - 2016)

Sl. No	Subject	2012[164]	2013[165]	2014[166]	2015[167]	2016[168]
1.	Cases Pending Trial from the Previous Year	1,01,041	1,14,785	94,634	1,07,477	118537
2	Cases Sent for Trial During the Year			30,840	30,001	33,628
3	No. of Cases Withdrawn by the Govt	0	2	3	19	0
4	No. of Cases Disposed by Plea Bargaining	-	-	40	1	25
5	Total no. of Cases for Trial During the Year	-	-	1,25,431	1,37,458	1,52,165
6	Cases Compounded or Withdrawn	292	221	253	174	215
7	Cases in Which Trials were Completed	14,717	18,833	17,649	18,764	18,552
8	Cases Convicted	**3,563**	**5,101**	**4,944**	**5,514**	**4,739**
9	Cases Acquitted or Discharged	**11,154**	**13,732**	**12,705**	**13,250**	**13,813**
10	Cases Pending Trial at the End of the Year	86,032	95,731	1,07529	1,18,520	1,33,373

Note- Data complied as per latest publication of Crime in India 2016

Interpretation of Statistical data:

1.   No. of cases registered from 2010- 2016 is showing an **increasing trend**.

2.   No. of cases where **charge sheet** submitted **is high**.

3.   No. of cases **withdrawn** by Govt. is very **minimum**.

4.   Among the adult **rape victims**, **maximum** number of cases reported in **the age group of 18-30**, which according to Indian scenario is the ideal age group for marriage of a female.

5.   In **most of the cases victims were known to the offender**. A sudden jump in the number of cases under the category of Rape on promise to marry the victim is found from 2015 to 2016.

6.   From 2014- 2016 **increase in number of cases in which Final Report (FR) submitted as false** was observed.

7.   From 2012- 2016- No. of cases **acquitted or discharged is quite significantly more than the number of cases convicted**.

8.   All together **conviction rate** in rape case is quite **low** (2010- 2016)

A critical view of **acquittal/discharge rate** by the courts shows that as high as **in 74.5% cases** the convicts were either **acquitted or discharged** and hence not found fit for holding them guilty for the very grave nature of charges of rape framed. There could be many reasons for such a high rate of acquittal/discharge of accused like poor investigation, winning over of witnesses by the defence, poor quality of prosecution, liberal view taken by the court while giving the accused benefit of doubt, to name a few. **However, it can be safely assumed that a very significant number of cases failed just because the charges levelled were either false or highly improbable, giving no scope**

for the court to record a decision of conviction. But all the accused in this category had to undergo social and psychological trauma of no measure besides incurring very heavy litigation cost, before they were finally not declared by the court 'not guilty'. This is not to speak of the number of cases of conviction overturned at the appellate stage.

The analysis above shows how much ignominy and other costs are reserved for the accused implicated falsely in juridical system where it is claimed that LET 99 ACCUSED(OUT OF EVERY HUNDRED) GO SCOT FREE BUT NOT A SINGLE INNOCENT PERSON BE PUNISHED BY OUR CRIMINAL JUSTICE SYSTEM !! Can a judgement of acquittal/ discharge from the court is enough compensation for the unbearably prohibitive costs/injuries inflicted on him, in term of personal, social, psychological and economic costs? Certainly not. If someone has consciously decided to wreck the life of an innocent by **Doubtful/Motivated Allegations/Implication of Rape**, she or he must be made **accountable** for it by the courts/ criminal justice system by **slapping** her/him **with exemplary costs** in order to deter others from making a similar venture against some other innocent person.

Conclusion & Suggested Action -

The comparison compels one to take due note of the fact that the situation on the ground has since undergone qualitative change to a significant extent, courtesy all-round decline in public and private morality in our society.

It is also true that in spite of different judicial references relating to the cases of false allegation of rape/ doubtful allegation of rape in n number of adjudicated cases, there is no empirical data available to any agency.[163]It calls for a **well thought of Research Project by**

our academic institutes like National Law Schools, on their own or in collaboration with the Bureau of Police Research & Development, National Police Academy and recently set up State Universities on Security. The **findings to be received from such exhaustive research studies can arm us with the necessary inputs fit for consideration in policy decision making on this subject**.

However, till that sort of empirical inputs become available through research studies it will be imperative that taking due note of the alarming aspect of this subject and to prevent and to discourage tendency to make false allegation of rape by some victims, the investigation agency and the trial courts must examine cases of such nature with perpendicular approach**. Therefore with the object of unearthing the truth, the investigating agency is required to put some parameters for the purpose of investigation.** These parameters can be maintained by the following way by mining the answers of the following questions-

1. Who filed the complaint in investigation agency?

2. If the complainant is neither the prosecutrix, nor parents/ foster relative/ legal guardian, then to examine the reason for filing the complaint?[169]

3. Date and Time of commission of offence V/S date of reporting of the incident to law enforcement agency. If there is a severe delay then what is/ are the reason/ (s) behind the same.

4. Whether the prosecutrix raised the alarm during the incident or not? If not, then what is the reason?[170]

5. If the victim is an unwilling party to undergo medico-legal examination, what is the reason for same?[102, ,171]

6. Whether she had refused to deposit her wearing to police on the material time of commission of sexual intercourse or not? If she refused to deposit her clothing with police for forensic examination, what is the reason for the same?

7. If there is any delay between the date and time of commission of offence and reporting to police, then what is the reason? Whether such reason satisfied the investigating agency or not?

8. If there is an excessive delay in lodging FIR, then is there any discrepancy found in the statement of prosecutrix or not (i.e. Complainant has remembered the entire incident but she did not remember the date and month of incident)?[172]

9. Who accompanied the prosecutrix to police station also to magistrate court to record her statement u/s. 164 of Cr.P.C? If any person accompanied her whether such person is interested regarding punishment of the suspect or not? If so then what will be the benefit of that person?[173]

10. Is there any contradictory statement deposed by the prosecutrix during recording of statement u/s. 164 of Cr.P.C? If so, then what are possible reasons behind such contradictory statement?

11. Is there any discord/ legal battle is going between the parents of the victim or not?

12. Is there any record that the prosecutrix was suffering from matrimonial discord or not?

13. If there is incident of matrimonial discord, against whom prosecutrix filed complain in police station?

14. Whether the accused was having any link with the incident of matrimonial discord or not?

15. Who committed nuisance with the victim?

16. Is he known to the victim or not?

17. If the subject is known to the victim, then how .... the subject has known to her?

18. What type of relation exists between them?

19. Whether any political person had perused the law enforcing agency or not? If yes, then what will be the interest of the same person?

20. If the subject is known to the victim, how long?

21. Is there any personal enmity between the complainant and the offender?

22. Whether the victim has desire to take revenge on the suspect or not? If yes, then what is the ground for the same?

23. Is there any enmity between the victim's family and the family of accused?

24. Whether the family of victim is in debt to the family of the accused or not? If there is any claim of loan given to the family of prosecutrix by the family of accused, then of the financial capability of the accused/ family of the accused matching with the amount of loan given or not?[102]

25. If the family of the victim was in debt to the family of accused, then whether was there was any pressure to repay loan or not.

26. Whether the prosecutrix had provided any financial loan to the offender earlier than the commission of offence or not? If any loan is given by the prosecutrix to the offender, then is the financial capability of the prosecutrix is matching with the amount of loan given or not?[54]

27. Is there any clear evidence on record that the victim had a sexual relationship with multiple people or not?

28. Whether the victim is engaged in unethical practice or not? If yes then how the role of offender is going against the interest of the victim?

29. Is there any incident that the victim had sexual intercourse with the offender prior to the commission of offence?

30. Whether the parent/s was/ were aware about the sexual intercourse of the victim with the offender or not?

31. Whether there is any pressure from the parents to lodge a complaint against the suspect with malicious intention or not? If yes then what will be the benefit for the parents of the prosecutrix?

32. Whether the complainant received any tutoring from any one or not for the purpose of lodging the complaint?

33. Is there any infirmity in the statement of victim?

34. Whether the victim at first lodged complaint for any other offence against the suspect and later on lodged complain for the offence of rape? Then, what are reasons behind the same?

35.   Whether the victim is habitual of filing false allegation of rape or not? If yes, then how many such cases were filed earlier?

36.   Whether the suspect had launched any suit/ prosecution earlier to the happening of incident against the victim/ family member (s) of victim or not?

37.   Date of commission of alleged offence and date of medico-legal examination.

38.   Whether the prosecutrix had taken bath or changed her garments before the medico-legal examination or not? If the victim had taken a bath or changed her garments what was the reason for such act? Is she aware of the fact that change of garment, after commission of sexual offence or taking a bath or both will destroy the physical evidence relating to offence or not?[174]

39.   Whether medico-legal examination report supports the claim of the prosecutrix or not? Whether F.S.L report supports the version of the prosecutrix or not?

40.   Whether the prosecutrix filed any affidavit to retract the complaint or not? If yes, then what is the reason shown by prosecutrix to retract?

41.   Whether the PWs are supporting the statement of victim or not?

42.   Mobile tower location of the suspect v. Place of Occurrence (P.O)[175]

43.   Mobile tower location of the victim v. Place of occurrence (P.O)[175]

44.   Whether the prosecutrix was in telephonic contact with the accused prior to lodging the FIR with police or not? If

yes then how many calls were made by the prosecutrix to the phone of the accused prior to lodging FIR?[176]

45.   Whether the suspect is a transgender or not? If the suspect is a transgender, then what is the opinion of medical expert regarding capability to perform sexual intercourse or not?[177]

46.   Whether the subject was capable of commission of sexual intercourse or not?

47.   Whether medical evidence clearly points out the possibility of recent sexual intercourse or not?

48.   Is there any evidence which confirms that the victim came either to police station or jail to meet the suspect or not? If yes, then what is the reason for the same?[171, 178]

49.   Is there any professional rivalry between the suspect and any other person or not? If there is any professional rivalry between the suspect and any other person, then the victim has any relations with that person or not?[175]

50.   Whether the prosecutrix was involved in any organized racket of extortion or not?[105, 106]

51.   Is there any clue that the prosecutrix joins hands with the conspirator/(s) who want(s) to grab the property of the so called accused and insisted the prosecutrix should lodge complain against the so called accused?[173]

52.   Is there any CCTV footage that confirms the presence of the suspect on alleged date, time and place as stated by the victim?[179]

53.   Whether the prosecutrix had claimed that she was pregnant during the alleged time of sexual assault and due to such act abortion happened or not? Whether such statement was confirmed by medico- legal examination or not?[180]

54.   Whether the prosecutrix had claimed that she was not accustomed to sexual intercourse prior to the incident or not? Whether such statement was confirmed by medico- legal examination or not?[181]

55.   Whether the prosecutrix had gifted any valuable gift to the accused prior to the incident or not?[182]

56.   Whether serious discrepancy in oral evidence of the prosecutrix was found or not? If found then try to match with Call Details Record of Prosecutrix and Suspect.[183]

57.   Whether the prosecutrix was instigated by any member of NGO or Counsellor/(s) to register false complaint against the accused or not?[87, 103] If yes, then what are the reasons for the same? What will be the end profit for such an act by the NGO or Counsellor/(s)?

58.   Is there any hue & cry in media or not? If yes, then is it influencing the investigation or not? If the same is influencing the direction of investigation, then whether the law enforcement agency had taken any legal step in this regard?

59.   Was there any massive public protest carried out under the banner of any N.G.O or not? If yes, then who were the participants? Profiling of the participants? Whether the participants were paid for such rally or protest gathering or not? If yes, then what is the source for such payout?

Therefore, it is imperative that during inquiry into such charges by the courts, the Presiding Officers may also, as a **rule of prudence**, keep in the mind the invaluable principles laid down by their Lordships in a host of cases decided finally by the constitutional courts in sensitive cases of the nature covered under the larger issue under discussion in this document. It is hoped that utmost adherence to the aforesaid observations of the constitutional courts during the trial stage with the cooperation of prosecution, will help the victims and the accused (rather the survivors of false allegations) to get justice at the hands of our ever vigilant judiciary.

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Police Performance Measurement Index

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Abstract

Performance measurement is regarded worldwide as an essential component of management competence and excellence in both private and public sectors. Hence, this concept is increasingly gaining importance, albeit with varied degrees of prominence, in different countries of the world. In this paper, the author provides a brief history of police performance measurement and analyses in detail the various aspects of police performance management, such as why police performance needs to be measured, what parameters should be measured, and how these should be measured. The paper concludes with the author's recommendation of a single index, summing up all the measures of processes, outputs and outcomes, which assists in the transparent and objective measurement, monitoring and management of the performance of the police department.

Key Words

Police performance, Performance measurement, Police force, Crime prevention, Citizens safety, Public perception

Introduction

Performance measurement continues to be a complex area in which there is no agreement on what criteria should be measured, how they should be measured and how the results can be used for improving the performance of the respective organisations. Nevertheless, there is a growing consensus on the fact that performance measurement can play a vital role in shaping up the policies and culture of the organisations.

The performances of private commercial organisations are generally measured by assessing their 'bottom line' performance, i.e., the value of net profit earned. Even though other measures of performance have been added, the 'bottom line' essentially remains the basis for performance measurement in private organisations. It is not possible to follow such bottom line measurements in every public sector enterprise. Some public sector organisations are exclusively service-oriented, and it is often a strenuous task to measure the quantity and quality of the services rendered by such organisations. Police force is one such organisation. It is not only service-oriented but also one of the most powerful verticals of the state organizational hierarchy. In the opinion of some police experts across the globe, the service provided by the police force is very complicated.

Author's Intro:

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As policing involves management of several intricate decision-making verticals, many of which do not render themselves to be readily measurable, its performance cannot be assessed through sheer comparison of numbers. There is another school of thought among prominent police experts who feel that police performance has to be measured by evolving and developing suitable parameters to ensure satisfactory performance management. Management Guru Peter Drucker states: "If you cannot measure, you cannot manage."

Tasks performed by the police force are multidimensional. Their routine functions include prevention and detection of crimes, arresting criminals, charging them, enforcement of various special and local laws, and dealing with traffic-related offences and accidents. They are also expected to amicably find solutions to other conflicts in their communities, prevent or reduce social disorder, bring out changes to ensure harmony among communities. Measurement of police performance, which has multiple dimensions, is a complicated task (Moore and Braga, 2003; Hassell, "Solomon" Zhao and Maguire, 2003; Coleman, 2012). At the moment, there does not exist a single evaluation mechanism to judge or gauge police performance. Also, it is important to ensure that police force does not take it upon itself to unilaterally determine its performance, especially because its achievements are also dependent upon the cooperation and professionalism of judiciary, prosecutors, prisons, hospitals, etc. The functioning of these other departments and their supervision do not fall within the purview of the officials managing the police force.

Management of the performance of the police force requires not only accurate assessment of several aspects of police performance but also judicious decision-making as to how the information so derived could be utilized to ensure more effective, efficient, and honest police work.

Police Performance Measurement ¾ A Brief History

Until the 19th century, crime prevention was perceived as the primary function of the police departments in the western countries. With the advent of the new century which presented increasing complexities and new problems, such as the labour problems, the police force had to take up the major responsibility and the function of maintenance of order. The new century emphasized the significance of performance measurement in private and public organisations and hence the related activities were also initiated.

Subsequently, some countries initiated the performance measurement of the police department at the outset of the 20th century. The Federal Bureau of Investigation's Uniform Crime Reporting (UCR) Programme was launched in USA in 1930. The main indicator of this programme was crime clearance. Activities related to police performance measurement showed a major increase in the following three decades. Nonetheless, the approaches remained conventional and most of the assessment indicators continued to measure the various traditional parameters of crimes, such as crime rates, response times, arrests, clearances, etc. In the 1960s and 1970s, research works not only pointed out the various shortcomings in the existing traditional measures but also emphasised the need for the police performance measures to be wider, all-encompassing and more inclusive. In the early 1970s, the expenditure on police force in the UK was budgeted mainly on the basis of their performance. With the growing demand for expenditure on police to be treated as value for money in the 1980s, the UK home department issued orders in 1983 to set clear objectives and priorities for the police

department. These, however, remained quite vague. In 1993, a high-level enquiry into the responsibilities and rewards of the police force had suggested that the appointment of the police officers should be on a contract basis and their payments should be completely based on their performance. As the performance assessment criteria remained very vague and complex, this recommendation evoked stiff opposition, forcing the government to revoke the proposal. Subsequently, the UK government launched the National Policing Objectives for the first time in 1994-1995. From the 1990s, the UK police started to make their objectives public and also commenced the measurement of their performance against these objectives as part of their performance management system.

During the same time, statistics-based programmes, such as Compstat, DEA, Balanced Scorecard, etc., were developed in the USA. These performance measurement programmes gradually became very popular not only in the US but also in several other countries worldwide.

Traditional methods started to dwindle in importance with the evolution of the concept of community policing. Focus slowly shifted from conventional methods to community methods of performance measurement, with several countries starting to pay more attention towards the community policing surveys, such as citizens surveys, contact surveys, victim surveys, etc. The public perception of police performance can be appropriately measured by studying the results of such surveys. Though the concepts of these surveys originated in the USA, these have garnered increasing attention from research scholars worldwide due to their relevance in the performance measurement process.

In the UK, the Police Reform Act of 2002 mandated the government to lay down the Annual National Policy plans and objectives, based on which the performance of the police

department was to be assessed. Further, the UK government went ahead to exclude all police performance targets except public confidence in 2008. Subsequently, in 2012, the UK government also introduced elected Police and Crime Commissioners (PCCs), with the singular aim of improving the cost effectiveness and accountability of local policing. This measure coincided with both a real-term reduction in police expenditure and a marked improvement in public satisfaction.

Of late, many countries in the world have started to implement varied experiments and exercises on police performance measurement within their territories.

Why Measure Police Performance?

Robert D. Behn puts forth eight different managerial purposes that may be served by various types of performance measurement and monitoring methods (Table 1).

Table 1 Eight Purposes That Public Managers Have for Measuring Performance

The Purpose	The public manager's question that the performance measure can help answer
Evaluate	How well is my public agency performing?
Control	How can I ensure that my subordinates are doing the right thing?
Budget	On what programs, people or projects should my agency spend the public's money?
Motivate	How can I motivate line staff, middle managers, non-profit and for-profit collaborators,

	stakeholders, and citizens to do the things necessary to improve performance?
Promote	How can I convince political superiors, legislators, stakeholders, journalists and citizens that my agency is doing a good job?
Celebrate	What accomplishments are worthy of the important organizational ritual of celebrating success?
Learn	Why is what working or not working?
Improve	What exactly should who do differently to improve performance?

Source: Behn (2003).

All the above-mentioned eight factors are self-explanatory and are equally applicable to the police force, thus necessitating the performance measurement for the police department too. Following are some aspects worth considering under each of these factors:

(i)   Senior police officers would be required to assess the performance of their force at the beginning itself before proceeding further to make any future improvements. Performance is always difficult to improve when accurate and relevant information about the present performance is not available. A supervisor in a private corporate, a student or a budding sportsman will be able to improve only when he/she knows where exactly he/she stands today, i.e., his/her present rating within the company/school/club should be known to him/her. Before initiating the

performance management exercise and establishing its necessity in the police force, following is a relevant conversation between Alice and the Cheshire Cat from *Alice's Adventures in Wonderland*:

"Would you tell me, please, which way I ought to go from here?"
"That depends a good deal on where you want to get to," said the Cat.
"I don't much care where–" said Alice.
"Then it doesn't matter which way you go," said the Cat.

– Lewis Carroll, *Alice's Adventures in Wonderland*

A senior police officer may think he/she knows the path he/she wants to tread on; unless he/she is absolutely clear about the starting point and the goal post, there is every possibility that it may end up being a mystery tour. However, unlike Alice who travelled alone, the police officer may force several million pounds worth of expensive resources to accompany him/her into Wonderland (A.J.P. Butler, 1984 *Police Management*).

Scientific parameters for performance measurement can surely lessen the subjectivity involved in the assessment process. Subjectivity is considered to be a recurring fault of the police leadership. In the late 1990s, the management-savvy Home Secretary of Tamil Nadu laid down some basic parameters to assess the performance of the district police forces. Unfortunately, this was resented by many "anti-change" senior police officials who opined as follows: "We do not need statistical weapons to tell us who is good and who is bad. We are interacting with them daily and, therefore, we know very well who is what!" Such an air of superiority has led to subjectivity in the force, which can be alleviated by the use of scientific methods of performance management.

(ii)   Chain of command (also referred to as "hierarchy of authority" by Max Weber) is an indispensable component of police administration. Everyone in the force works under a superior. As one goes below in the hierarchy, this pyramid of control grows wider. Through the measurement of performance of subordinates, a senior police officer will be able to assess their overall achievements and thereby take adequate action to ensure quality control within the organisation.

(iii)   In democratic nations, police force is answerable to the citizens through their elected political representatives and the attendant processes of governance. Thus, people have a say in the functioning of their police force and they pay for the functioning of police force by way of various taxes. Today, all nations are increasingly investing huge public money in their police forces. Therefore, every citizen has a right to ask where his/her money is being invested and whether there is any return on their investment in public good. The public officials who are responsible for handling finances/funding and are in decision-making positions, especially regarding the allocation of resources for police force, must have accurate and relevant information relating to the police performance. This will enable them to attribute performance to the value of financial resources provided. In the absence of such data and analysis, the issues relating to accountability and transparency cannot be handled in an impartial and professional manner. The police department must also substantiate how the budget allocated was used to achieve its overall goals and objectives. In theory, the demonstration of positive

results can have a decisive effect on government funding. This underscores the essential principle "what gets measured gets done" and the Kelvin dictum "what cannot be counted is not worth knowing" (Edwards, 2005; Fleming and Scott, 2008). Police services are also accountable to the public similar to all key areas of government spending. Therefore, they are often called upon to show evidence of their performance (Rollings and Taylor, 2008). As Moore and Braga sum up: "Policing managers, too, have needed a measure of police performance ¾ partly to meet external demands for accountability, and partly to establish a form of accountability inside their organisations that could focus attention on achieving valuable results rather than simply reliably executing established policies and procedures."

(iv)   Senior police officers can motivate and improve the abilities and performances of their subordinates, public participants and various other stakeholders by the use of key performance measures. A person's performance is regarded as the function (f) of ability and motivation, as shown by the following formula (Robert *et al*., 2002, p. 186):

Performance $= f$ (ability $\times$ motivation),

where ability refers to a person's talent or skill. As managers, senior police officials should focus on improving the skills and performances of the concerned personnel by using the outcomes of the performance indicators designed carefully for assessment purposes. They should implement schemes such as performance-based incentives in order to motivate the staff to deliver high performance consistently throughout their service.

(v)   A senior police officer will also have opportunities to promote the organisation through presentation of the performance measures before the political leaders, media, public and all the other stakeholders. Any performance improvement noted can be showcased as an achievement in continuance of the objectives and goals of the department.

(vi)   Performance improvement certainly brings a lot of cheer to the police leadership. Therefore, all achievements of the organisation can serve the purpose of improving the morale of the rank and file.

(vii)   Performance measurement not only presents the management with an opportunity to learn both from the successes and failures of the strategies and practices (Carter *et al.*, 1992) but also allows an organisation to track poor performance. The process of benchmarking within and between organizations can help promote innovation to a large extent and can also act as an incentive for staff to achieve consistent levels of high performance (de Bruijn, 1962).

(viii) Last but not least, service delivery and performance can be greatly improved by utilizing the learning obtained from performance measurement of the organisation and the experience of other organisations. It is significant to institutionalise performance measurement, ingrain it in the culture and ethos of the organisation, and reinforce the constant drive for improvement. This process, which becomes an integral part of the organisational culture, is also referred to as *performance management*.

What and How to Measure?

Each organization in the world is driven by a goal and have their own purposes and objectives to serve. In general, the purpose and objectives of an organization are delineated in the form of duties/responsibilities. For public service organisations such as the police force, the government is in charge of mandating the functions and responsibilities. This process is usually carried out either via an order from the respective authority or by enactment of a law. In India, multifarious responsibilities, duties, and powers are assigned to the police force under various statutes. The National Police Commission set up by the Government of India in 1977 lists the following as the major duties and responsibilities of the police force in India:

(i)   promote and preserve public order;

(ii)   investigate crimes;

(iii)   identify problems and situations that are likely to lead to crimes;

(iv)   reduce the opportunities for the commission of crimes through preventive patrol and other police measures;

(v)   aid and cooperate with other relevant agencies in implementing appropriate measures for the prevention of crimes;

(vi)   aid individuals who are in danger of physical harm;

(vii)   create and maintain a feeling of security in the community;

(viii) facilitate orderly movement of people and vehicles;

(ix)   counsel and resolve conflicts and promote amity;

(x)   provide other appropriate services and provide relief to people in distress;

(xi)   collect intelligence reports relating to matters affecting public peace and

crimes in general, including social and economic offences, national integrity and security.

Each organisation should have focused and definite objectives within the overall framework of mandated duties and responsibilities. These objectives should be established and monitored by using various management techniques and strategic planning measures. The objectives should also be transparent, easy to identify and measure, thus facilitating simpler processes for target assessment and outcome measurement. According to Peter Drucker, who coined the phrase "management by objectives", without a goal or an objective, it is impossible to know where you are going, when you will get there, how efficient you have been in the process. One of the greatest benefits of *management by objectives* is that it allows the manager to regulate his own performance, thus increasing his motivation and desire to deliver the best results possible. The obvious result in this case is higher performance (*Modern Police Administration* by Favreau and Gillespie).

It is customary for governmental agencies/ departments to outline their mission or vision and project these as the central elements of their tactical planning process. These strategic elements aid the organisation in the realisation of organisational direction, policies and objectives. Even though mission, vision, values, assumptions, and business strategies are all rather different elements in nature, all these play an equally important role in the establishment of the objectives and plans of an organization (*Law Enforcement Tech Guide for Creating Performance Measures That Work*, p. 38).

Around the globe, nowadays, police departments clearly define and publish their mission statements. Some of them also describe vision, values, assumptions, and business strategies in addition to the mission. Following is an example of the mission and value statements of the New York Police Department (NYPD) (*Law Enforcement Tech Guide for Creating Performance Measures That Work*, p. 38):

Mission

The mission of the New York City Police Department is to enhance the quality of life in New York City by working in partnership with the community to enforce the law, preserve peace, reduce fear, and maintain order. The Department is committed to accomplishing its mission of protecting the lives and property of all citizens of New York City by treating every citizen with compassion, courtesy, professionalism, and respect, while efficiently rendering police services and enforcing the laws impartially, by fighting crime both through deterrence and the relentless pursuit of criminals.

Values

In partnership with the community, we pledge to:

- Protect the lives and property of our fellow citizens and impartially enforce the law.

- Fight crime both by preventing it and by aggressively pursuing violators of the law.

- Maintain a higher standard of integrity than is generally expected of others because so much is expected of us.

- Value human life, respect the dignity of each individual, and render our services with courtesy and civility.

- *Mission* statements identify the overall purpose for which the organization is organized.

- *Vision* statements describe the future business environment and the role of the organization within it.

- *Value* statements reflect fundamental beliefs and values guiding the agency, the nature of its responsibilities, and the philosophy underlying its approach.

- *Assumptions* are also frequently discussed in strategic planning efforts, describing business environmental conditions that are expected in the future.

- *Business strategies* identify *how* objectives are to be accomplished, e.g., community-oriented policing.

The Government of India undertakes the task of defining the so-called Citizen's Charter, which is rendered mandatory for all the administrative and constitutional departments. The Department of Personnel Reforms and Public Grievances, which manages the implementation of Citizen's Charter among various governmental organisations set forth the following important ideas:

"The main objective of the exercise to issue the Citizen's Charter of an organisation is to improve the quality of public services…"

"A Citizens' Charter represents the commitment of the Organisation towards standard, quality and time frame of service delivery, grievance redressal mechanism, transparency and accountability." (goicharters.nic.in)

It is very important to comprehend the following pertinent concepts and terms clearly before assessing the key indicators and procedures for police performance measurement:

Inputs: This term refers to the resources, such as human resources, land, capital and materials, used to produce the outputs of an organization. The key inputs of the police force include operating costs, staff costs, and the consumption of capital assets, such as buildings, vehicles, information technology.

Outputs: This term refers to the goods and services produced by an organisation. The key outputs of the police force include number of crimes detected, number of arrests made, number of traffic offences booked, number of cases cleared and disposed of in the court of law, etc. While it is possible to measure outputs clearly in terms of quantity, they can also be directly manipulated by the police force.

Outcomes: This term refers to the essential benefits rendered by the police force to the community they serve. The feelings of safety amongst residents can be quoted as an example of a typical outcome. As the outcomes are fundamentally derived from the public perception, these can be influenced by the police force through various positive courses of action, such as crime prevention, community policing, etc. However, it is worth noting that certain factors which determine the public perception fall outside the realm of police control, for example, an unexpected terrorist attack in a crowded market can trigger fears of safety in the minds of the people in the neighbourhood. Nonetheless, the police force can restore the feelings of safety and win the confidence of the affected people through hard work and strategic planning.

Efficiency and effectiveness: Efficiency involves the cost of achieving a particular result, in other words, it is the ratio of resources used (inputs) to the results delivered. There are different ways of representing this ratio: per rupee, per officer, per employee, per hour, etc. The term "increased efficiency" is usually used to refer to the achievement of the same or better results with a reduction in the cost or the achievement of better results with the same cost. The efficiency of two or more organisations can be compared on the basis of the costs incurred and the results achieved by the respective organisations. For example, let us assume city X and city Y, *ceteris paribus*, have five patrols

each, but city X secures 10 criminals and city Y secures 20 criminals. In this case, city Y is obviously considered to be more efficient than city X. Thus, efficiency deals with the cost incurred in pursuit of the objective.

On the other hand, effectiveness involves the measurement of the achievements or results against the objectives set. Both efficiency and effectiveness hence involve the assessment of the delivery of results against objectives and targets set. While efficiency is concerned with the costs, effectiveness does not take account of the costs involved.

It is possible that a police department turns out to be very effective without being efficient. This is because some organisations with abundant resources can pursue and realize their goals without having to worry too much about cost. Hypothetically, the reverse could also be true. It is futile, however. for the police force to incur least costs and be nowhere close to their goals. Hence, it is very crucial for one to assess efficiency with due reference to effectiveness (Butler, 1984, pp. 41-43).
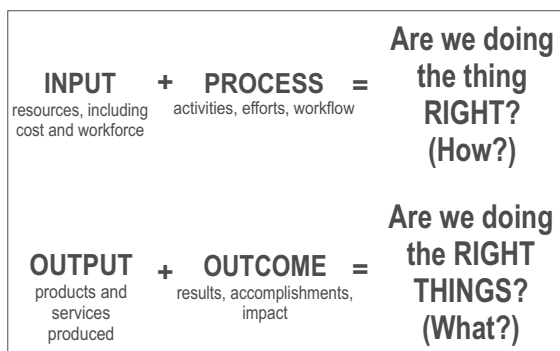
Another very important question in police performance measurement is: What are the various parameters that need to be measured in order to arrive at an appropriate judgement of the police performance? The US Justice Department's *Law Enforcement Tech Guide for Creating Performance Measures That*

Work presents the following model to address this question:

How an organization is faring or producing is usually considered as the internal issue of the organization. This aspect is covered hence by the input and the process. On the other hand, the output and the outcome cover what an organisation produces and how the organisation fulfils its commitment towards the goals and objectives set.

As discussed earlier, the product or the service delivered by an organization to its customers is assessed by the output measures. Data relating to number of accused arrested, number of cases detected, prosecutions launched and disposed, traffic violations booked, emergency calls attended, etc. constitute some of the basic examples of output measures in the police department.

Since its inception, "output" has always been regarded as a key performance indicator in the performance measurement system. In 1994, the NYPD introduced a new system called "Compstat", which became widely known as a police version of the performance-based management system. The term "Compstat" comes from the term *computer statistics* (or comparative statistics, depending on the source). Compstat makes use of statistics to help organisations in achieving a clearer understanding of their strengths and weaknesses and also in laying down the targets and plans to bring about further improvement. The programme attracted worldwide attention and was implemented later on by various police forces and other departments around the globe. Some departments even customised this programme further to suit their practices. Few examples of such personalised versions of Compstat include Australian Operational Performance Reviews (OPRs) and Victoria Police's 'themed COMPSTATS'.

| INPUT
resources, including cost and workforce | + | PROCESS
activities, efforts, workflow | = | Are we doing the thing RIGHT? (How?) |
| OUTPUT
products and services produced | + | OUTCOME
results, accomplishments, impact | = | Are we doing the RIGHT THINGS? (What?) |

While some researchers contend that Compstat has had a tremendous impact on the crime rate in New York (Henry, 2003), some others have put forward suspicions regarding the causality in crime reduction figures and have been largely skeptical about the effectiveness and capability of Compstat to bring about a reduction in crimes on its own (Eck and Maguire, 2000; Brereton, 1999). Few scholars also criticised Compstat for its overdependence on statistics on the crimes due to the fact that these figures are prone to manipulations and underhand practices. This method also did not include various outcome-related issues, such as general safety, human rights protection, etc.

Another widely popular output-based performance measurement method is the *Balanced Scorecard* method. Developed by the Harvard Business School (Kaplan and Norton, 1992), this method was mainly used in the private sector by managers who benefitted with the opportunity to know more about their business through the assessment of a wide range of indicators of finances, customer satisfaction and other aspects of business performance. Various police forces around the world, such as those of Spain, Sweden, Portugal, etc., used this method extensively for police performance measurement. However, similar to Compstat, this approach was also known for its overdependence on statistics and crime data.

Data Envelopment Analysis (DEA) is a very powerful benchmarking tool used for the assessment of the efficiency of a business unit. The tool undertakes the analysis of the productivity of the most efficient units and recommends improvements for the units showing low performance.. This popular technique was used for police performance measurement by the South Wales police forces, 49 US continental states police services, Spanish National Police Force, etc. Verma and Gavirneni (2006) used this technique for measuring the

efficiency of police services in Indian states. In their study, four inputs (expenditure, staffing, investigators, and cases investigated) and four outputs (number of arrests, charges, convictions, and trials) are identified and the data across Indian police units are compared against each other. The study clearly shows that some police units perform better than the others and further delineates possible implications for resource allocation.

Unintended Consequences of Police Measurement

Statistical analysis of the outputs such as crime data is the central process in all the above-mentioned performance measurement techniques. Statistics is used by many senior police officers at various stages for periodical reviews of performance of their subordinates. However, many scholars contend that such measurements of performance can lead to several inadvertent negative consequences. Collier (2001a) maintains that such performance measurement is directly in conflict with the basic human rights. He argues that police officers, in their desperate attempt to meet performance measurement targets, might end up compromising human rights. This proposes greater officer autonomy and a "values-based learning paradigm based on the professional clinician model". Patrick (2009) debates how police performance measurement can result in negative activities, such as manipulation of statistics and misapplication of data, and goes on to suggest that such activities could in turn negatively affect the resultant measures. Eterno and Silverman (2012) also toed a similar line of argument and put forth a similar conclusion.

A broader view of its mission, as per Goldstein, a broader view of the dimensions of performance, as per Moore, and a clear appreciation of the metrics that go with the different types of work involved constituteing

the basic requirements of modern police organisations. On the whole, police departments require more complex cockpits. Police officers should hence achieve a more refined understanding of how to deploy the different types of information in order to understand the condition of their organisations and assess the important events in the communities they serve (Sparrow, 2015). Thus, standards of service delivery and achievement of the objectives can be appropriately measured by the better yardsticks presented by the outcomes.

Outcome Measurement

The outcome measures should specifically relate to the following important aspects during the implementation of the police performance measurement:

(1) **Aims and objectives:** It is important for outcome measures to relate directly to the key aims and objectives and targets set for the police departments.

(2) **Input costs:** Unlimited budget is a misnomer and does not really exist. The police forces simultaneously need adequate inputs in order to deliver the goods in adherence to the "Best Value" principles.

(3) **Factors within police control:** Several factors cannot be influenced by the police, e.g. factors such as changes in demographic and economic conditions cannot always be predicted. Citizens can be affected by unexpected events such as a high-profile murder in an otherwise peaceful and crime-free area. Insufficient lighting conditions in some colony can attract criminals to operate and escape, resulting in difficulties for the police force to prevent crimes and also a consequent drop in the confidence levels of the citizens.

As noted earlier, the police forces put forth their objectives by defining their mission and value statements. The outcomes are directly concerned with the realisation of these objectives. If the police force has set an objective of providing safety to the citizens, then what success has been achieved by the department in providing the feeling of safety will have to be measured. If the objective set is to free a particular area from violent crimes, then it has to be monitored whether the citizens feel safe against the violent crimes in the respective area. If the objective is to provide a people-friendly police, then how the people feel about the general police conduct will have to be assessed. Thus, the outcomes are basically arrived at by evaluating the public perception, which can be usually ascertained through customised surveys. In this context, the following survey methods deserve special mention (CALEA, issue 84):

(1) **Community Surveys (or Citizens Surveys):** Community surveys, also called citizens surveys, are conducted by interviewing the community members and assessing their opinions regarding the effectiveness of policing services or complaints regarding police misconduct. Usually, some random members from the community are selected or some representative samples are used for such interviews. As police are accountable to the public, who contribute decisively to the effectiveness of the police services, public perception of the police performance is considered to be a significant assessment factor. Citizens survey can provide the police force with valuable information, such as information about crimes/criminals, problems faced by the community, specific complaints about the behaviour of any police officers, suggestions for improving police effectiveness, citizen's willingness

to cooperate with police, etc. However, it is worth noting that such community surveys are also strongly influenced by neighbourhood context, respondent demographics, and media coverage of the police (e.g., Miller and Davis, 2008). This is because many ordinary citizens would never have had any encounter with police, and therefore first-hand information about the police behaviour and its effectiveness may not be forthcoming.

(2) **Contact Surveys:** Contact surveys are conducted by interviewing those who have had recent contact with the police. These interviewees can comprise victims, complainants, witnesses, accused, drivers, etc. These surveys can be effectively used to eliminate the above problems as they provide feedback to the police department on how they can serve the people, particularly various sections of the society, and also about the public perception of police activities. When the Toronto police ran a survey amidst rape victims, they received innumerable complaints about the uniformed officers who responded to the initial call, but at the same time, the department's sex crimes unit garnered nearly universal praise from the respondents. Surveys involving arrestees and accused can also prove to be very useful. "Although a common perception is that such surveys would not be useful because all arrestees will be dissatisfied with the outcome, research has shown that citizens are willing to accept negative outcomes if they view the process that led to the outcome as fair." Contact surveys are also very helpful in monitoring any changes in public perception over a period of time thanks

to administrative improvements, such as improved supervisory approaches, certain training programs, etc.

(3) **Employee Surveys:** Employee surveys serve the purpose of assessing the employee perception regarding the morale of the police force, administration of the organisation, environment of integrity, etc.

(4) **Direct Observation:** Trained raters or coders can directly observe and collect valuable information about the police performance. Although Mastrofski had developed some direct observation techniques, this is often considered as a personnel-intensive, complicated and, consequently, very unaffordable method and the use of this technique is seen to be limited.

(5) **Independent Testing or Simulation Studies:** Independent tests provide simulated opportunities to assess performance, for instance, the crash tests run by the Insurance Institute for Highway Safety aids in ranking vehicle safety:

"The Institute's primary mission is research, and insurance companies rather than auto manufacturers fund it. Many firms hire people to pose as customers (known as "secret shoppers" or "mystery shoppers") who visit their facilities to perform checks on quality of service, cashier accuracy, ethical standards, and many other issues. Internal affairs units in large police agencies have conducted various kinds of "integrity tests" for many years. *ABC News* conducted independent integrity tests of police in New York and Los Angeles by turning over 40 wallets or purses to police officers chosen at random. The Police Complaint Center (PCC) is a Florida-based firm that conducts proactive investigations of police misconduct. The PCC

videotapes its investigators in a variety of settings: being stopped by officers, trying to secure complaint forms from police agencies, and other situations. PCC investigators have videotaped numerous instances of police misconduct." (CALEA, Issue 84).

Despite the fact that such tests provide a lot of independent information on police behaviour, the method itself is considered to be controversial, unaffordable and hence very unpopular.

A Balanced Approach For Performance Measurement

As mentioned earlier, identification of the "bottom line" of policing is a challenging task. Treatment of crime as the "bottom line" of policing ignores the fact that many factors assisting crime reduction could actually be outside the influence of the police force. Police officers could manipulate statistical data and deploy underhand methods, such as non-registration of the complaints, or application of unjust methods for crime detection to project reduction in crimes:

"Useful performance measurement schemes must include multiple indicators of what police do (that is, outputs), how it is done (that is, processes), and what is accomplished (that is, outcomes)."

– *What-When-How*

In Depth Tutorials and Information. Introduction: A Lost Civilization.

Indian Context

There seems to have been no systematic effort for a long time towards police performance measurement in India. Even though some prominent scholars such as Verma and Gavirneni (2006), Nagesh *et al.*, Manish Gupta, Chandra and M. P. Gupta analysed the police performance in Indian states by applying the DEA technique,

all the above measurements were completely based on the inputs and outputs supplied by the state police forces. During the period, 2005-2008, Rajasthan State Police implemented a project with the assistance of MIT. The outcomes were evaluated on the basis of the following parameters: (1) impact on control over crime and criminals; (2) impact on responsiveness (non-registration of crimes); (3) changes in public opinion; (4) changes in police morale; (5) changes in knowledge of duties; (6) quality of investigation; (7) relations with public; (8) stress levels of police personnel.

The Rajasthan State Police continued training their personnel for continual improvements on the above factors (Note on 'Police Performance and Public Perception' by Banerjee *et al.*).

The Bureau of Police Research and Development (BPR&D), Government of India issued directions and guidelines to all the state police forces in the country following the above model of Rajasthan Police for the measurement of the performance of their police stations based on the criteria given and their circular memorandum (Neely *et al.*, 1995). Following are some points highlighting the areas for improvement in the above approach:

(1)   The "processes" and "outputs" of the police are covered by all the scoring metrics provided in this format. The measurement of "outcomes" is regarded as the most acceptable and appropriate performance indicator. This is unfortunately ignored in totality in this system. Although one such outcome, "community outreach", has been included, this is limited to the extent of counting the number of monthly "CLG" meetings held. Hence, this does not qualify as an outcome. Specific parameters relating to "processes", such as suspension of the personnel, trap by

the ACD, verifications, pendency, false entries, maintenance of the police premises, etc. have also been included.

(2) The performance of the supervising officers is evaluated in the system by summing up the marks scored by the police stations under their control, thus making it an incomplete measure of their performance. While the performance of the superior officers should indeed be measured on the basis of the performance of police stations under their control, it is also very important to assess their performance on the basis of their execution of their personal responsibilities. For example, as per police rules, a subdivisional officer has his own responsibilities, such as undertaking personal investigations of some heinous crimes, following up on the same for successful disposal, conducting disciplinary proceedings against the erring subordinate officers, undertaking periodical visits to and inspections in the police stations and other units under his control. It is important for such visits and inspections to be qualitative, as it can then only contribute a lot to improving the functioning of the police stations. Thus, the personal performance of the superior officers should be measured and appropriate weightage should be allotted to this factor in the overall performance measurement and calculations. There could be scenarios wherein all the three station house officers (SHOs) working in the particular subdivision are very smart and efficient, and have maintained their best performance in the district, however the supervising officer, despite being inefficient in his personal responsibilities and performance, will continue to score very high marks thanks to the efficiency of the three SHOs in his subdivision.

(3) It is very likely that the police officers could be fudging the statistical data in this marks-based system. Various tactics, such as non-registration of crimes, undermining the value of stolen properties to show lesser figures, even booking innocent persons for the sake of showing case detection, were deployed by the police personnel to manipulate the statistics. Pendency of non-bailable warrants (NBWs) was one of the criteria in the metrics scoring process. In 1998, the Home Secretary of Tamil Nadu State had circulated the key norms for performance measurement. Following this order, police officers "discovered" a new method whereby they return the pending NBWs to the courts concerned with a request for a fresh issue. In this way, some officers were able to project "nil" pendency of NBWs for consecutive months and thus managed to score very high on the respective metrics.

(4) It is not always possible for every police station to score equally well on the various criteria. The BPR&D scheme, for example, allots 12 marks per month for detentions under NSA and Goondas Act. As some police stations cover law and order problems-affected jurisdictions, it may not be difficult for them to meet the targets. However, some other police stations cover completely non-sensitive jurisdictions, such as those limited to the important religious places, industrial zones, etc., wherein it may simply not be possible to exercise detention under these provisions. Thus, they have no option but to forgo the respective scores, thus

placing them at a disadvantage and restricting their capacity to compete with other police stations.

(5)   Based on the gravity of the crime concerned, the performance under various heads of crimes has to be given due weightage during the assessment process. For example, arrest in a simple case of, say, affray is far simpler than the execution of a warrant or arrest of an absconding accused in a serious crime of murder or dacoity. Hence, different weightages have to be allotted to the processes of investigation and prosecution under different heads of crimes.

Conclusion

In view of all the above and various other reasons, the author wishes to put forth a few important, subjective and comprehensive indicators for the overall measurement of police performance. Emphasis is also given to the fact that the comprehensive metrics should comprise a reasonable mix of the measures of processes, outputs and outcomes. The author intends to develop one single index to sum up all the measures with the wide experience he possesses in developing such single indexes in his earlier capacities as the Superintendent of Police, Tuticorin district in 1998, Additional Commissioner of Police, Chennai City in 2007, and subsequently as Commissioner of Police, Chennai City.

The police stations stand as the basic units of the departments in charge of the final execution of the objectives set for the department. Also, the police stations are the only units, which strive to be directly in contact with public, thereby attending to all the police-related services required. Therefore, the government or the Chief of the Force would certainly be interested in monitoring how each station discharges its duties

and performs its responsibilities and whether their services are satisfactory in line with the objectives of the department.

As the entire performance review process is lengthy, heads of the organisations often find little time for conducting detailed reviews of the performance of police stations functioning directly under their control. Hence, random figures of the performance based on some items of crimes are taken as criteria for the review due to the lack of time for in-depth and personalized reviews. This in turn results in a highly subjective performance review. Finally, the performance rating of the police station is largely dependent upon the personal behaviour of the SHO and his relationship with the head of the unit.

For the sake of fair inter-station comparison and accurate performance measurement, such subjectivity has to be completely eliminated. Also, the governments are usually very interested in gauging the improvement levels in the performance of the various police stations over time against the budget allocated therein through the identification of the shortcomings and the areas for further improvement.

Therefore, a standard scale has to be developed for the purpose of measuring the performance of each police station, which is the basic unit of the police department. The performance measures for the superior officers can also be devised on the basis of the performance of the police stations under them and certain other parameters in relation to their duties and obligations.

A weightage system has to be formulated by allotting due weightage to every parameter on the basis of the experience of the officers in charge of the system design. With his wide-ranging experience in handling various policing issues for more than three decades, the author can use his discretion well in the formulation of

such a weightage system. Despite its arbitrary nature, the weightage system is equally applicable to everyone, thus achieving an objective comparison. Statistical formulas are first designed for the calculation of the marks scored under each parameter and these values are then incorporated into the software.

The value of the final index based on all the above calculations will range between 0 and 1.

The processes and outputs of the police performance to be measured and the quantum of weightage to be assigned to each indicator will be listed. Simultaneous contact surveys are also recommended by the author as the main indicator of the outcomes of police performance. It is not advisable in the present situation to undertake other forms of surveys to gauge the public perception in India. The author intends to devise and put forth various parameters, methods and formulas for performance measurement and finally assimilate all of these into a single index in his forthcoming research thesis. The upcoming work will include the details of the indicators, the formulas used and the preparation of the single index. This index will be comparable to its own performance as against any earlier period and also other similar units. The author recommends a performance management system to be adopted as part of the culture of the organisation. This system should aim for a transparent and objective measurement, monitoring and management of the performance.

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"Samarth - Breaking Barriers" Therapeutic Intervention Program Rationale and effectiveness in Sabarmati Central Prison Ahmedabad, Gujarat

Reena Sharma*

Abstract

Violent Offenders form a substantial portion of any prison population and are often regarded as a threat to the community as a whole. The chances of re-offending are also considerably high in violent offenders when compared to non-violent offenders. For this reason, such violent offenders need to access appropriate treatment within correctional settings to change their thinking patterns, behavior and to inculcate pro-social behavior. While therapeutic intervention models have been successfully implemented in correctional establishments worldwide, there is an absence of similar systematic interventions within Indian Prisons. The purpose of this study is to understand the success of therapeutic intervention programs globally and to measure the impact of a pilot research study based on systematically designed Therapeutic intervention program offered to offenders convicted in the Gujarat Central Prison in India. Based on the extensive review of the literature available on this subject, an intervention plan was scientifically designed and adopted for the Indian context. The intervention was developed to help assess prisoner's preparedness and to reintegrate them into society by working with them to replace their criminogenic needs with alternative pro-social cognitive patterns. The positive results of the pilot study encouraged the inception of the Samarth- Breaking Barriers Therapeutic program, extending the intervention based on Forensic Cognitive Behavior Therapy (CBT) and Positive Criminology to other central prison establishments within the state of Gujarat, India.

Keywords: Offenders, Violent, Therapeutic, Intervention, Criminal Procedure, Forensic, Cognitive, Criminology

Introduction

According to The Code of Criminal Procedure, 1973, offence means "any act or omission made punishable by any law for the time being in force and includes any act in respect of which a complaint may be made under Section 20 of the Cattle Trespass Act, 1871 (1 of 1871)" (Criminal Manual, 2015, p.73). There are a significant number of criminals convicted in India for varying offenses, of which a significant portion is convicted for violent offenses. According to the

National Crime Records Bureau, in the year 2016, the percentage of Indian Penal Code (IPC) crimes to total cognizable crimes is 61.6% (National Crime Records Bureau, 2016) in India.

According to Ware et al. (2010) violent offenders are those who have assaulted their partner or children, have committed violence within a gang context, in the course of a robbery, amidst a serious fight or fights, and murders (p. 2). Violent offenders are also a difficult population to engage in therapeutic change (Day et al., 2009).

Author's Intro:

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These individuals will in general have increasing rates of violent offending in comparison to other offenders (Polaschek et al., 2004). Ware et al. (2011) argues that these kinds of offenders require proper treatment and management or else there are high chances of recidivism. To address recidivism, a number of models have been developed and successfully implemented worldwide, such as the Multifactor Offender Readiness Model, Good Lives Model, Reasoning and Rehabilitation, Risk Need Responsivity, Anger Management, and Offender Readiness Model (Day et al., 2010; Bonta and Andrews, 2007; Chu and Ward, 2015; Ross, n.d.). Samarth was conceptualized by bringing together these successful models and adapting them to the Indian context basis deep insights of needs within Indian Prisons. These insights were developed on a basis of multiple interactions with offenders. This program aims to bring about holistic reintegration of offenders in the society by inculcating basic cognitive skills and mindfulness.

In the following sections we will describe the conceptualization of Samarth, its rationale and effectiveness. We will first begin with understanding violent offenders, their thinking patterns and criminogenic needs. We will then discuss violence and outline the different forms of violence. On a Basis of the different violent manifestations, we will discuss various approaches or models that have been successfully adopted to treat prisoners across the world. We will then come down to the specific description of Samarth and its treatment context. We will finally conclude the paper discussing the outcome of the intervention program and the need for establishing such therapeutic interventions within Indian prisons.

Violent offenders:

Violence is the intended use of control or physical force which is threatened or sometimes actual, against self or other individuals, or a group as a whole. This may result in injury, death, mental harm or deprivation. (World Health Organization, 2002).

Violent offenders are at times treated as a 'homogenized' gathering; however, there are several sorts of violent offending, various kinds of violent offenders, and various experts working with people who have been a part of such violence (Kemshal et al., 2015). It is essential to grasp these minute differentiations among offenders before designing a treatment plan to ensure its effectiveness.

Criminal Thinking Patterns

Violence could be motivated due to multiple factors. The work of Walters and Yochelson with offenders, Beck and Ellis with non-offending clients, have given way to three criminal thinking themes, namely, control, cognitive immaturity and egocentrism. The first one refers to the want of power and control over oneself, other people, and the environment. In this type, offenders try to control others using sex and fear as weapons. The second one is characterized by impulsivity, overgeneralization, and severe form of judging. Offenders with these characteristics are prone to label others in extreme ways and see their past as a cause of their present situation (Kroner and Morgan., 2014). The third theme is egocentrism and there are specific patterns attached to this, that involve other's actions to oneself, expecting fair treatment from others in spite of the harm caused in a situation, and also performing positive acts to recompense for the negative perceptions of self's criminal behaviors (Mandrachhia et al., 2007).

Criminogenic needs

The theory of criminogenic needs explains the attributes and circumstances of offenders and how, post-change, there are diminished rates of recidivism (Bonta and Andrews, 1998). The notion of criminogenic needs is taken under consideration, whereby the offenders characteristics leading to a lower rate of recidivism are targeted. According to Ward and

Stewart (2003), this notion should be implemented in order to construct successful rehabilitation programs. The criminogenic needs theory focuses on working only on those characteristics that will ultimately lead to fewer criminals going back to prison. The requirements ought to be recognized for each individual type of crime rather than general violations (Ward and Stewart, 2003). The correct recognition of risk factors and the development of proper measures to combat them, will ultimately lead to the effectiveness of this program that caters to lasting offender rehabilitation (Ward and Stewart, 2003).

Types of Risk factors

Offenders could be triggered by intrinsic or extrinsic factors, and the risk posed by such factors needs to be assessed before developing intervention programs. Intrinsic factors are psychological and influence offending or reoffending. Extrinsic factors are environmental and social in nature. According to Day et al. (2010) risk is best seen in relevant terms as opposed to viewing it simply as established by individual deviancy. It is crucial that a comprehensive risk management plan considers people's specific way of life and environments. Even those dynamic risk factors that reside 'inside' people (impulsivity, aggressiveness) are just as important in their particular social and situational setting.

Readiness factors (Cognitive factors and affective factors)

While care can be taken to design intervention programs basis risk assessment of factors, the success or failure of a program relies also on the willingness and readiness of the offender to change. Readiness factors are characterized as the central psychological features that empower offenders to work in a therapeutic setting (Day et al., 2010, p. 27). These elements will incorporate "cognitive (beliefs and cognitive strategies), affective (feelings), volitional (objectives, needs or wants), or behavioral (aptitudes and abilities)" (p. 27) factors.

Bandura (1997) points out that in relation to treatment engagement, self-efficacy stood out to be an aspect of cognition that attracted a lot of attention. Low self-efficacy can lead to offenders believing that they are not capable of learning any new skills (Bandura, 1997) which would disengage and discourage them from actively participating in the treatment. The way offenders react to programs or showcase their readiness is something that needs to be discussed further and there is limited literature covering this aspect (Lyon et al. (2000). However, Dear et al (2002) and Hobbs and Dear (2000) argue that sometimes offenders can hold very negative views towards any kind of approach that provides emotional support and shows resistance towards such programs.

In order for offenders to successfully be engaged in treatment programs, offenders need to have a basic level of emotional support from family, immediate relatives or friends. In addition to this, Day et al. (2010) state that the way an individual emotionally reacts to the offence and the status of the offender forms a vital component in their readiness to change. They also argue that the affective factors are poorly understood, difficult to assess reliably, and are not well investigated.

When it comes to volitional factors, having a set of goals in life is necessary to lead a fruitful life. This has been supported by Emmons and King (1998), who pointed out that engagement with a set of valued goals, gives meaning to life, which is again related to happiness and well-being. This is associated to offender rehabilitation as well. It is important to help the offender build an identity as a law-abiding citizen who will be useful to the society (Day et al., 2010). By effectively encouraging offenders to contribute to the society and by urging the society to acknowledge offenders as esteemed individuals, a sense of belongingness is built. This in turn encourages the internalization of what may have started as remotely coordinated objectives, to be specific to

turning into an honest and valuable individual from within the society (Day et al, 2010).

Offender readiness

Apart from the factors above, there are various issues identified that may lead to a lack of offender readiness towards treatment. Learning challenges, an absence of verbal abilities, cultural factors where therapist is of a different culture, a certified absence of inspiration to change, and denial of the violent offenses have all been featured as significant issues to address before an individual begins offender treatment (Howells et al., 1997; Serin and Preston, 2000). Any of these issues may result in an offender being "safe" to restorative endeavors. This is a grave concern given that violent offenders who quit treatment quite often have higher violence recidivism rates than offenders who are not offered any treatment (Serin and Dowden, 2001).

Types of Violence

Intimate relationship partner violence

Golding (1999) points out that the high rate of Intimate Partner Violence (IPV), along with the physical, psychological and interpersonal consequences experienced by victims of this kind of abuse, makes it a significant threat to the society. IPV is considered to incorporate physical aggression, but also reaches out to demonstrations of verbal, psychological, and sexual maltreatment, notwithstanding other coercive practices (Ware et al., 2011). To describe intimate partner violence, words like "battering", "spousal abuse" and "marital violence" have also been used by Graham-Kevan and Wigman (2008).

Instrumental v/s expressive violence

Instrumental violence occurs when people endeavor to achieve pre-determined objectives and somebody forestalls them. Expressive violence has been labeled by McGuire (2008) as "reactive", "angry", "emotional", or "impulsive" violence". The expressive kind of aggression is

said to happen because of an outrage-inciting circumstance, for example, a physical assault, or crushing disappointment. The objective here is to cause pain and suffering to the victim of the offense, and is inspired by a longing to hurt or harm someone (Santtila et al, 2003). Moreover it is rash and uncontrolled, and is hence classified as an emotional response.

Engagement issue with violent offenders

Insufficient attention in the field of responsivity is a problem that is being recognized in all kinds of treatment programs. Therefore, readiness of the person for the program and readiness of the program for the targeted population needs to be addressed at the time of conceptualization of the intervention program. Offenders with low readiness often drop out midway from the treatment, thereby producing poor treatment outcomes. (Day et al., 2010). Additionally Hodge and Renwick's (2002) study has given proof of the problems of motivation in mentally disordered offenders, which causes them to disengage from treatment programs.

3.   Models to treatment of violence

There are various examples of Cognitive skills programs. These include Reasoning and Rehabilitation, Think First and the cognitive self-change model (Antonowicz, 2005; McGuire, 2005; Bush, 1995). These models argue that (vicious) offending is brought about by anti-social discernments and if offenders are assisted in perceiving their thought patterns that lead to offending behaviors, then they can be open to adopting better approaches to correct such behavior.

In purview of the rehabilitation efforts with violent offenders, scholars have distinguished offender treatment based on a theoretical approach. Treatment programs have been classified based on Multifactor Offender Readiness (Day et al., 2010), Anger Management (Hamrod and Hayes, 2014), Good Lives Model

(Chu and Ward, 2015) and many more.

Dialectical Behavior Therapy (DBT):

Dialectical Behavior Therapy is an evidence-based psychotherapy and a type of Cognitive Behavior Therapy (CBT) (Moore et al., 2016)., originally developed by Linehan (1993) for the treatment of individuals with borderline-personality disorder. It looks into the causes for maladaptive behavior and then provides offenders with alternative skillful behaviors. DBT states that violent behavior or aggression is a result of strong emotions that get reinforced further by short term distress and reaction to extreme behaviors. DBT has been implemented in correctional or forensic settings successfully (Moore et al., 2016). It is very effective in coping with aggression and has proven to be useful among prison population. This kind of intervention can affect employment, community adjustment and recidivism rates (Moore et al., 2016, p.29).

Multifactor Offender Readiness Model (MORM):

Ward et al has developed a multi-factor offender readiness model or MORM to assist practitioners in building a strong alliance with participants in the intervention, in order to increase the chances of engagement. This model looks at both internal (personal) and external (contextual) factors.

The internal factors are: cognitive (beliefs, cognitive strategies), affective (emotions), volitional (goals, wants or desires), behavioral (skills and competencies), and identity (personal and social). Such internal factors could cause low trust in therapy either due to outcome expectancies (may be based on previous experience) or perceptions of and beliefs about therapists which needs to be addressed to improve their engagement with the intervention.

The external factors are: Circumstances (statutory or voluntary), Location (prison, community), Opportunities (availability of programs), Resources (quality of intervention and culture),

Inter personal supports (availability of individuals who wish individual to succeed), Program characteristics (type of program and timing) (Ward and Maruna, 2007; Ward and Birgden, 2007).

Good Lives model (GLM) :

The Good Lives Model for offender rehabilitation is a contemporary, qualitative approach to offenders' recovery, that emphasizes the development of their personal goals together with the reduction in chances of future offending, as per the precepts of positive criminology (Laws and Ward, 2011; Ward and Maruna, 2007; Ward, 2002; Ward and Stewart, 2003). As indicated by the GLM, people are dynamic and goal-oriented, and primarily try to secure essential human goods so as to obtain prosperity. Primary human goods are qualities, encounters, and perspectives that are valued by people to be good for them. They are needs that add to their feeling of satisfaction and happiness (Ward, 2002). Day et al. (2010) are of the view that GLM has the theoretical assets to give experts a calculated guide to control all parts of their clinical work with the offenders, and also to help steer exercises of other remedial specialists and network volunteers.

Risk need Responsivity Model (RNR)

RNR has been used extensively in the treatment of offenders (Day et al., 2010). The RNR approach revolves around the use of various core principles of offender rehabilitation (basically the risk, needs, and responsivity standards), every one of which tries to distinguish the sort of individual who may be viewed as reasonable for rehabilitation. RNR model is one which represents principles for elective interventions, within which a variety of therapeutic interventions can be employed (Andrews & Bonta, 2010)

(James, 2015) Risk and needs assessment instruments comprise of several means used to gather information on practices and dispositions,

that research demonstrates are identified with the danger of recidivism. By and large, prisoners are categorized from high to low risk. Assessment instruments include static and dynamic risk factors (James, 2015). Static risk factors do not change, while dynamic risk factors which change either on their own or due to some mediation. Broadly research validates that the most generally utilized assessment instruments can, with a moderate dimension of accuracy, anticipate who is in danger of violent recidivism.

Reasoning and Rehabilitation (R&R)

The R&R program has been applied across the spectrum of offender types: chronically recidivistic adult offenders, "pre-delinquent" children in schools, violent offenders, alcohol and drug abusing offenders, property offenders, sex offenders, child and spouse-abusers, white-collar criminals, and mentally disordered offenders (Ross, Hilborn and Liddle, n.d, p. 2). The R&R program depends on the social learning theory which posits that offenders have failed to procure essential psychological and social skills important for resolving life issues in pro-social ways. The program guides members through critical-thinking, and social abilities including arrangement, overseeing feelings, inventive reasoning, value analysis, and basic reasoning, with a point by point manual (Berman, 2004).

Motivational Interview

Motivational Interview is an approach which helps therapists to communicate about change. Initially, it was used in the works of addiction, but gradually its approach was widened and it was used in varying populations and contexts. Motivational interviewing is effective because it enhances the treatment engagement of participants (Rollnick and Miller, 1991). Tafrate and Luther (2014) discuss four processes that are a part of motivational interview. The first process is engaging oneself in a helpful and useful relationship with the client. The second process is one's focus on a strategic direction around one or

more goals. Evoking the reasons for change in client is the third process. Planning is the final process that is on consolidating commitment and creating a strong plan of action (p. 413).

Acceptance and Commitment Therapy (ACT)

ACT can be applied to the incarcerated or community correction populations. It is a behavioral approach to intervention that utilizes acknowledgment, care procedures, and duty and behavior change procedures to deliver mental adaptability (Amrod and Hayes, 2014; Hayes, Strosah and Wilson, 2012; Hayes, 1982). Amrod and Hayes (2014) also state that ACT has been a success irrespective of whether it is applied individually or in groups. It is also useful for short-term and medium-term protocols; face to face and via books and internet; and is a useful intervention for ones who are involved in the criminal justice system. The breadth of its application and the flexibility of its delivery make it useful for prison establishments with limited resources.

Anger Management (AM)

According to Ware et al. (2011), AM programs tend to be encouraged in gatherings and are brief in length (i.e., 10-20 sessions). They are normally centered on expanding the offender's consciousness of indignation and its triggers, and afterward giving a range of abilities including social aptitudes to help the offender diminish anger arousal and enhance anger control. Day (2014) adds that while planning anger management interventions, it is better to recognize cultural differences, because the prison population is different in many ways from the general community.

Samarth Therapeutic program for offenders

Samarth is India's pioneering Therapeutic rehabilitation intervention program for offenders based on Forensic CBT and the philosophy of positive criminology. The initiative focuses on providing skills and therapeutic tools which will

empower offenders to solve their problems using pro-social methods and reintegrate with society. The goal of this intervention is to enhance the emotional competency of the participants, and to educate and reinforce lost dignity, strength, and wisdom. The intervention inculcates cognitive restructuring to bring about a change in the criminal lifestyle by learning social and problem solving skills that are pro-social in nature. Samarth's philosophy is to advance beyond traditional criminology. The ideology is not just to understand the cause or the execution of a crime, but to delve deeper into the mindset and thinking patterns of an offender and offer alternative means to break such criminal thinking pattern. By focusing on change and positivity, the objective is to assess the offender's readiness to change and to guide them to expedite this process of change to leave a meaningful impact.

The pilot study conceptualized in 2017 studied 118 violent offenders convicted of Murder and Rape.The outcome of the study resulted in establishing a Center named Samarth: Breaking Barriers inside the Central Prison. The first centre was formally inaugurated in February 2018, in Sabarmati Central Prison, Ahmedabad. In Feb 2019 Samarth has been extended to all the central Prisons of Gujarat, Lajour, Surat, Rajkot, Baroda besides Ahemdabad. The scientifically designed program comprises three phases: pre-therapeutic intervention phase, intervention phase and post-therapeutic intervention phase. The treatment module focuses on the intrinsic and extrinsic factors which influences violent, anti-social offender behavior and helps them to learn skills to break these patterns. The module also helps them to coordinate better with other departments like vocational skills, legal aid, and medical to resolve their queries. The program was delivered in individual sessions and group settings of not more than 10-15 participants in one group. Till now Samarth has worked with more than 1000 prisoners. Samarth is open to all categories of prisoners.

Effectiveness of Samarth therapeutic program

The results of the pilot study a were encouraging and showed significant positive change between pre and post therapeutic intervention scores, which suggests that the therapeutic intervention was effective.

The effectiveness of therapeutic intervention was clearly visible in improving the treatment readiness, violent treatment readiness, psychological symptoms, social criminal identity, and self-esteem. The participants were visibly more treatment ready and reported high levels of treatment satisfaction. (Sharma, 2019).

On observing the positive impact of this initiative, it further got extended to all the other central prisons of Gujarat (Surat [Lajpur], Rajkot and Baroda) early January, 2019. Samarth1 centre has now been extended to be established within the prison premises of all the central prisons of Gujarat. In future research studies we will focus on understanding the reformation of the criminal justice system and the measures taken for restorative justice in India. The Program has been appreciated by the Home Minister Shri. Pradeep Jadeja, Gujarat & DGP & IG Gujarat state Prisons.

Conclusion

The study has shown significant positive improvement in offenders from Pre-Post-Therapeutic intervention and establishes the need for therapeutic interventions within Indian correctional settings. While dealing with offenders one cannot assume that they will all be interested to opt for such treatment initiatives. By adopting motivational interviewing skills, offenders were first coached to bring in the readiness to change. On establishing a therapeutic alliance between the therapist and the client, reasons for coming for the intervention in the first place are addressed along with the actions that led them to be a part of criminal justice system. Criminal thinking patterns that trigger anti-social

behaviors need to be addressed in the Intervention. It is also critical to aid offenders to reinforce core values, identify pro-social goals, and instill a motivation to change (Tafrate et al., 2014).

Given the high percentage of population in prison, it is imperative to focus on the curative ideas to rehabilitation which also sustain the change in their behavior. The problem needs to be looked at from a physiological, social and psychological perspective, in order to give long lasting solutions by deeply understanding the primary &criminogenic needs of the offenders. It is recommended that such programs eventually become a standard protocol in the prisons and should also be recommended by the court and such relevant authorities. As the positive results from the preliminary research in the pilot batch of Samarth2 were promising and showed potential to influence change in the violent offender population, it is expected that it will be effective in other categories of offender population as well. Samarth can be used as a standard practice to make Government policy changes within the prison policies and manuals as well. Such programs will make a paradigm shift change in Offender Rehabilitation.

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Note for Contribution

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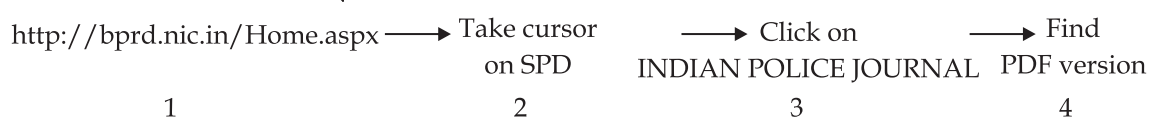
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