Exploring Failure Orientation : Its Mediating Role in Multidisciplinary Teams of the Petroleum Industry

Debasish Mukherjee [1]
Nitin Arora [2]
Subash Chandra Nath [3]

Abstract

Several factors that affect team effectiveness are listed in the literature on teams. This paper identified a new construct, "failure orientation," which measured the collective capacity of a team to cope, learn, and develop from team failures. Qualitative research identified some interesting features of the "failure orientation" concept and its mediating role in teams' input-mediator-output-input (I-M-O-I) model. The context was set in the Indian upstream petroleum industry, where failures are quite normal in oil-field operations. Learnings from such failures helped teams move forward to success in finding and producing crude oil and natural gas. The research methodology of conducting in-depth interviews of senior team leads and team members in two Indian public sector petroleum exploration companies was 80% of the industry activity. The findings enabled the development of a conceptual framework of failure orientation, which is a vital determinant of team effectiveness. The paper identified three categories (factors) of failure orientation for operationalizing this new construct: failure orientation in such multidisciplinary teams, that is, escapism, blame game, and collective analysis. The paper also positioned these as mediators in the I-M-O-I model of teams. Operationalization of the new construct would help practicing managers deal with teams encountering failures, which are frequent in this economically-vital petroleum industry. Further research with factor analysis could enrich the team literature significantly.

Keywords : **failure orientation, escapism, blame game, collective analysis**

JEL Classification Codes : J24, J82, L14, M12, O15

Paper Submission Date : July 30, 2021 ; Paper sent back for Revision : August 14, 2022 ; Paper Acceptance Date : October 15, 2022 ; Paper Published Online : December 15, 2022

Deloitte's 2019 Global Human Capital Trends survey shows that a team-based model improves corporate performance. Drivers of team and group effectiveness have received research attention for quite some time (McGrath et al., 2000). Several theories (Ilgen et al., 2005) have been used to analyze and correlate the variation in team dynamics with various team-related factors. One such factor is failure in teams. This paper pursues two research problems: (a) to develop a conceptual framework of failures in multidisciplinary teams and (b) to identify the mediating role of failures in the I-M-O-I framework of teams. Based on the findings, it posits a new construct, "failure orientation," which measures the collective capacity of a multidisciplinary team to cope, learn, and develop from team failures.

[1] *Research Scholar,* Amity University (Amity International Business School), Noida - 201 303, Uttar Pradesh. (Email : mukherjee_d@ongc.co.in) ; ORCID iD : https://orcid.org/0000-0002-2749-6056
[2] *Professor & Proctor,* Amity University (Amity International Business School), Noida - 201 303, Uttar Pradesh. (Email : narora4@amity.edu) ; ORCID iD : https://orcid.org/0000-0002-2215-7928
[3] *Associate Dean,* Sri Sri University, Bhubaneswar - 751 001, Odisha. (Email : subashnath@gmail.com) ORCID iD : https://orcid.org/0000-0001-7132-3999

DOI : https://doi.org/10.17010/pijom/2022/v15i12/172599

While the literature on teams is abundant, focused research on failures by teams is scarce. For example, Hollenbeck and Spitzmuller (2012) studied team structure in detail but did not investigate failure as a variable. A study on team classification (Mukherjee et al., 2017) identified two variables for classifying multidisciplinary teams in the upstream petroleum industry, but the impact of team failure did not figure there. This research fills in that gap, especially in the context of the petroleum industry, where failures are a regular drill of oil-field work.

The current research studies such failures in oil fields through the lens of 24 respondents (team leads and team members) and develops this new construct, "failure orientation," which measures the approach of the team members after the team encounters a failure. This orientation of "failure" is touched upon by some researchers like Cross (2011), though not in significant depth, let alone the mediating role of failures in explaining the relationship between team inputs and team outputs. This paper develops an operational framework of "failure orientation," proposing three approaches the team adopts after failure(s). As this industry is vital for developing economies like India, the findings of this research are relevant for petroleum corporations.

Learning from team failures is a vital element of the petroleum business. Studies (Mukherjee et al., 2017) show petroleum industry needs more team-related theories, especially the mediating role of failures (which they encounter frequently), to improve their performance. So, these research findings are in demand as per the current trends.

Literature Review

Work groups and teams in organizations have been a matter of scholarly research for some time. Kozlowski and Bell (2003) provided an integrative perspective on work groups and teams in organizations, identifying key issues needing research attention. Prabhu et al. (2019) studied the impact of team culture, embedded in team transformational leadership, on team effectiveness, evaluating the comparative effects of the constructs of team interaction process and workplace spirituality on the creation of process effects that lead to team effectiveness. However, no framework relating to failures in teams has been hypothesized in the findings of these studies on work groups and teams.

The mediating role of one variable in intervening or explaining the relationship between the dependent and independent variables has received regular attention from research scholars. For example, the moderating effect of knowledge sharing in the investigation of trust on innovation has been studied by Zhu and Chung (2020). Al-Nawasrah and Alafi (2021) investigated the impact of human resources' agility on job performance as a mediating variable in Jordanian Airlines. Further, Ahmad et al. (2022) studied the mediating role of a green lifestyle while identifying the impact of green human resource management on the green supply chain.

Shetty and Basri (2021) attempted to empirically validate a comprehensive model that combines individual traits, market competition, and organizational climate affecting the financial misselling by life insurance sales agents from an Indian perspective. Kurup et al. (2020) established that career advancement is a full mediator of career satisfaction, which, in turn, was influenced by career management techniques and work-life balance. However, the mediating role of "failures" in explaining the relationship between team inputs and outputs is missing in their studies. Singh et al. (2019) studied the mediation effect of locus of control on the relationship between emotional intelligence and employees' acceptance of the change. Negi (2019) examined the mediating or moderating role of self-efficacy in the relationship between stress and depression among students. While dwelling on the mediation effect of a variable on the relationship between the independent and dependent variables, these studies did not consider any team-related variable.

The mediating effect of different variables on team outcomes has been researched for some time. Prabhu et al. (2022) developed a model of serial mediation in team effectiveness, positing the constructs "spirit at work" and "team trust" as mediators in the relationship between shared transformational leadership and team effectiveness.

However, the study did not involve failure as a mediator. The mediating role of social loafing in a virtual team's effectiveness has been studied by Peñarroja et al. (2017), exploring the role of team feedback and guided reflexivity on virtual teams' affective outcomes. However, treating team failure as a separate variable and trying to understand its mediating role is missing in the literature.

The team structure has been a vital research element for its suggestive benefits in team effectiveness. A study on team structure by Hollenbeck and Spitzmuller (2012) listed the virtues and liabilities of different types of interdependence in teams and found that loose coupling may be a normative, and not just a descriptive, practice of organizational teams. Khatri et al. (2022) studied team leadership using qualitative methods. These studies, however, did not focus on failures in teams and their mediating role.

"The input-mediator-output-input (I-M-O-I) model" (Ilgen et al., 2005) comprises three phases of teamwork in cyclical order: (a) The input-mediator phase (the forming stage) is the early development phase of a team; (b) the mediator-output phase (the functioning stage) occurs when team members become familiar with collaborating with other team members; (c) finally, the finishing stage is concerned with the dissolution of teams. The first and second stages relate to the mediating effect of variables, where our research problem of the mediating role of failures comes in.

A recent study on team classification (Mukherjee et al., 2017) identified two variables for classifying multidisciplinary teams in the upstream petroleum industry: degree of interdependence (collaboration) and information diversity. Any team in the upstream petroleum industry can be classified in this conceptual grid by analyzing these two constructs. However, while the findings talk about the classes of teams in the petroleum industry, it does not dwell on team failures and how it mediates teamwork, which is our research problem.

Failure of teams has been a focus of research for some time. "HBR Case Study: A Rush to Failure?" (Cross, 2011) found that the most effective teams leverage failure as a tool. Cannon and Edmondson (2005) built a framework relating to technical and social barriers to three key activities identifying failure, analyzing failure, and deliberate experimentation to develop six recommendations for action. However, even such studies did not propose any framework for team failures.

Failures catalyze a transformation of even the most formal teams into informal ones. Kane et al. (2013) found that meetings of teams are more focused on tasks in formal set-ups, whereas informal set-ups result in more general discussions at the beginning and the end. Brown (1993) and Gibson et al. (2019) postulated that informal structures function on the ground of formal ones to compensate for some shortcomings of formal groups or to complete them or neutralize their rigidity. While such studies focused on the role of failures in transforming teams, there was no framework to work upon and no study on its mediating role.

Akella (2013) case studied the failure of a newly-recruited multidisciplinary team in consulting industry. The author found that conflicts, trust issues, and power struggles within teams bring down team effectiveness, and these are to be dealt with upfront and reviewed deeply after every team failure. However, the framework of failures in multidisciplinary teams of the petroleum industry is a different ball game as it relates to oil fields, and distinct research is needed to have a unique framework for the economically-significant segment.

The role of trust as a mediator came out as an interesting study among some researchers. Sharma and Yadav (2018) found a strong and positive relationship between organizational justice, trust, and work engagement; trust partially mediated the relationship between organizational justice and work engagement. Han and Harms (2010) conducted the first field study, examining the mediating role of trust between team identity and team conflict. Paul (2017) found that trust in teams could be managed with approaches like "recognizing excellence," "inducing challenges," "giving members discretion on how they work," and "sharing information." However, even such research fell short of developing a proper framework of teams indicating the sub-variables of failures.

Cognitive elements of teams, like shared mental models and transactive memory systems, have also been widely researched, especially in the context of failures. Guchait (2016) presented a theoretical framework

proposing the antecedents and consequences of team engagement. Giri and Chatterjee (2020) found that various factors like the creative process, inflexible communication process, conflict management process, and team management process positively impacted fluid team performance, leading to effective human resource management (HRM) strategies. However, the role of failures in bonding team members did not figure in such research studies.

Correlation of the Current Research with Earlier Studies

Literature has listed several team-related variables brought out above. Literature also dwells on mediating effect of a variable on the relationship between two others. Some studies even touch upon the role of failures in transforming teams. However, "failure orientation," as a standalone variable in teams, has not been studied, especially in the context of multidisciplinary teams in the upstream petroleum industry. In explaining the relationship between team inputs and outputs, a gap also exists regarding the mediating role of failures in teams. The current study, brought out in this paper, tries to fill that gap by developing a conceptual framework of failure orientation in the context of multidisciplinary teams in the upstream petroleum industry, where failures are a routine drill of the oil-field operations. The findings in this paper are an enrichment of the literature on teams and have practical value.

Research Methodology

A qualitative research methodology has been followed for this research. As the name of this paper suggests, this is an exploratory design that starts with the research problems only, without any hypothesis. The whole design is to collect rich, in-depth data for thematic analysis to answer the two research problems: (a) to develop a conceptual framework of failure orientation in multidisciplinary teams of the upstream petroleum industry, and (b) to find out the mediating role of failures in the team model.

Justification for a Qualitative Methodology

Answering the research questions, in this case, needs understanding (interpreting) of concepts, opinions, stories, and experiences of team leaders and members, which are available in the form of rich, in-depth data in interview transcripts. Therefore, it needs a qualitative (interpretivist) approach.

Sampling Design

Team leaders and team members in two public sector upstream petroleum companies in India were considered the sampling frame, as these companies contributed around 80% of the industry output, with over 50 years of maturity each. The rationale behind this criterion for choosing the sampling frame is that sampling units need to have an academic interest and involvement in team management to answer the research problems. The recruitment of the 24 respondents for interviews (and subsequent focus group) was made from this sampling frame, that is, team leaders as well as team members involved in the upstream petroleum operations for the last 10 years (2010–2020).

Data Collection

Triangulated data were collected through the following tools:

- Semi-structured in-depth interviews and,
- Focus group discussions.

The primary tool was an interview (semi-structured, open-ended interview pointers) suited to generate primary data for this qualitative study — this tool yields unstructured (text-heavy) and high-density data to be analyzed by qualitative methods. The data comprised stories of the team leaders and team members, in the specific context of the research problems, vis-a-vis multidisciplinary teams in the Indian upstream petroleum industry. The pointers for the in-depth interviews were developed based on the I-M-O-I theoretical lens and team failure-related variables obtained from the literature. These were pilot-tested with five team leads and refined.

Respondents

Primary (qualitative) data were collected telephonically from 24 interviews: 13 team leads and 11 team members of drilling and exploration teams in upstream petroleum companies of India, that is, Oil and Natural Gas Corporation Limited (ONGC) and Oil India Limited (OIL) based on an in-depth Think Aloud interview protocol (with pilot-tested interview pointers). The respondents were in the age bracket of 35–55 years. All the respondents are from technical backgrounds, either graduate engineers or post-graduate geoscientists. Team leads and team members were labeled with numbers for research ethics, viz. Team Lead 1, Team Lead 2, Team Member 1, Team Member 2, etc., as indicated in the analysis extract in the Appendix. Their details are available with the principal author and can be shared for academic purposes.

The data were collected through semi-structured interviews and focus group discussions during the 13 months between March 2020 to April 2021. Geographically, these team leads and members were from different work locations of the two public sector undertakings, including Mumbai (Maharashtra), New Delhi (Delhi), Guwahati (Assam), Chennai (Tamil Nadu), Rajahmundry (Andhra Pradesh), Ahmedabad (Gujarat), and Jodhpur (Rajasthan). The qualitative data were collected in stages as the simultaneous analysis was done, as is the normative approach in qualitative research. In addition, focus group discussions were done online through Zoom meetings in April 2021. The collected qualitative primary data were thematically analyzed, as explained in the following section.

Analysis and Results

The qualitative data collected from the in-depth interviews and focus group discussions were transcripted, coded, and analyzed for patterns. As is the normative approach in qualitative analysis, data collection and analysis were almost simultaneous and concurrent. Qualitative data analysis revealed patterns that pointed to the necessity of the following data collection stage. The respondents in the second and third stages were nominated by the respondents of the earlier stage(s) based on their understanding of the research objectives and the emerging variables. The coded transcripts of the interviews and focus group discussions with various team leads and members in the two public enterprises were analyzed for patterns, and variables were subsequently identified. The coding of the data from in-depth interviews helped to trace and categorize the thematic patterns behind the evolving qualitative data. Theoretical saturation was reached after three rounds of data collection, i.e., no more categories emerged. Excerpts of the qualitative analysis (thematic coding) are detailed in the Appendix, highlighting the patterns and variables which emerged, showing the journey from grounded data to theory through codes, sub-categories, and categories. The findings are reported in Figure 1 under Findings/Propositions.

Based on this analysis, the sub-categories and three categories (factors) have been identified to operationalize the variable "failure orientation," which, as per the views and concepts figured in the interviews, recurrently

mediates the input-output relationship. Manual sorting or refining the data was preferred over computer programs such as NVivo. The manual process enabled closer proximity to the data, which is important in qualitative research with in-depth and rich data. Employing NVivo12 concretizes abstract concepts using standardized models, ignoring the rich context of the data. The manual method yielded richer contextual analysis, providing better answers to the specific research questions.

Findings/Propositions

Based on our analysis elaborated above, a conceptual framework of this construct, "failure orientation," has been developed. Furthermore, the variables identified by theorizing the coding of qualitative data in this current study, while building upon previous research in the literature review, support this construct.

Conceptual Framework of Team Failure Orientation in the Petroleum Industry

Based on the qualitative analysis of the primary data collected from the 24 respondents, the findings of this paper are as follows.

In the upstream petroleum industry, failure is the norm for exploration. Exploration teams fail (to discover oil and gas) in 60–70% of the cases and succeed in 30–40% of the cases. Failures are the pillars of success as the learning achieved in those failures are stepping stones to success in their next jobs. These findings add to the literature, like the study of Prabhu et al. (2022) regarding the effects of variables on team effectiveness.

Hence, team failure orientation is a vital failure orientation that plays a significant role in team effectiveness. In the specific context of multidisciplinary teams of the upstream petroleum industry, three factors are crucial. They are "escapism," "blame game," and "collective analysis." The teams which adopt an escapist approach do not cope, learn, and develop from team failures. Incidentally, while they may achieve some team effectiveness, the bonding among team members may remain strong. On the other hand, teams that adopt the "blame game" approach, i.e., members blame others for failures, are neither effective nor bond well as a team. The sub-factors (for operationalization) of the "blame game" are (a) communication gap, (b) compromise, and (c) ego issues.

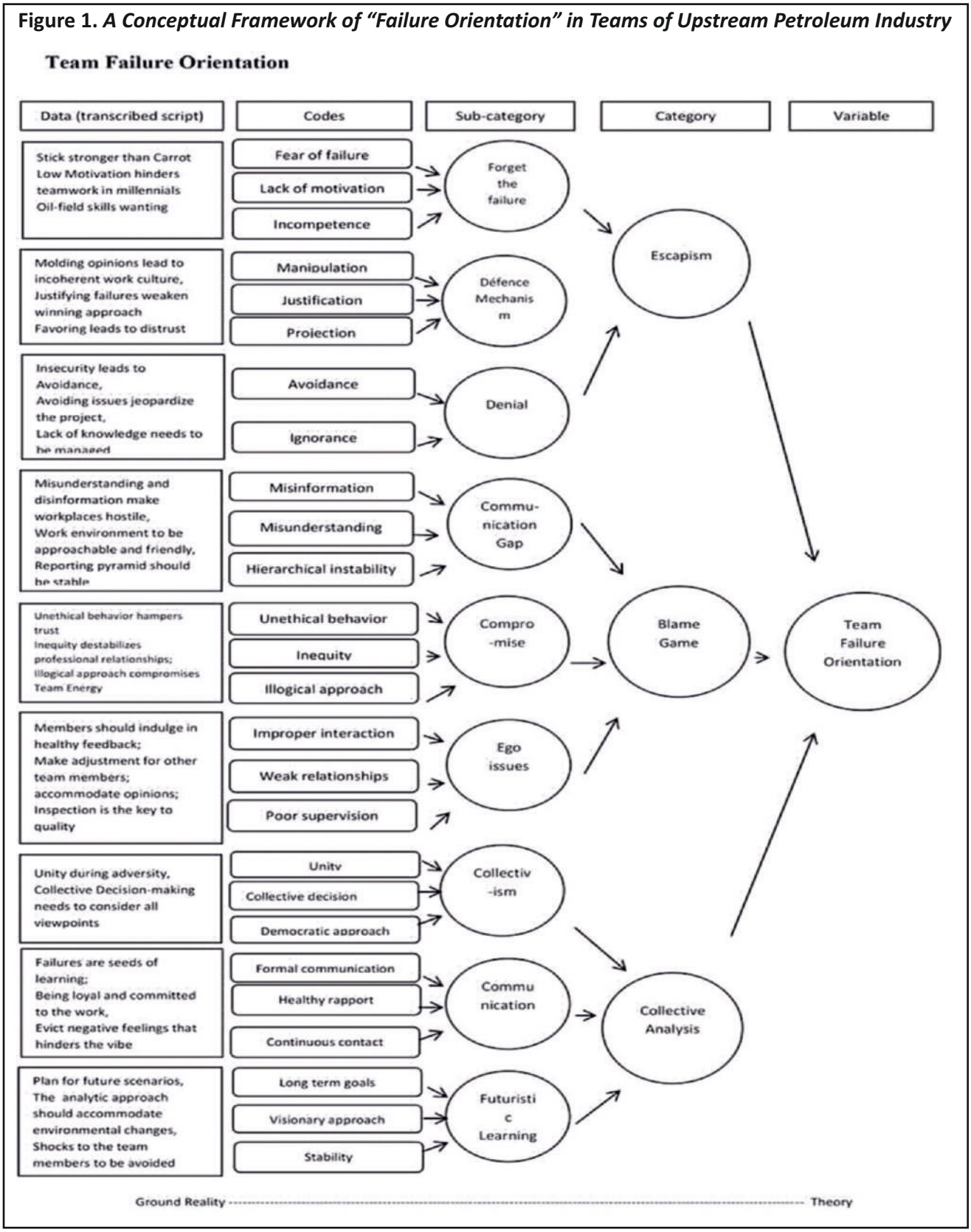
↳ **P1 :** "Blame game" negatively mediates the input-output relationship in multidisciplinary teams of the upstream petroleum industry.

In contrast, teams that "collectively analyze" their failures are those who own the failures. Such teams try to find out the root causes, are effective as a team, and have a strong bond among the team members. Moreover, such teams are democratic. They consider all team members' viewpoints and can better cope, learn, and develop from team failures. These findings enrich the research findings by Hollenbeck and Spitzmuller (2012) on team structure. The sub-factors (for operationalization) of "collective analysis" are (a) collectivism, (b) communication, and (c) futuristic learning.

↳ **P2 :** "Collective analysis" positively mediates the input-output relationship in multidisciplinary teams of the upstream petroleum industry.

Qualitative data analysis through a thematic pattern-finding approach also showed the sub-factors that make up the three factors. For example, collective analysis in a team is marked by the three sub-factors (categories) in those teams: collectivism (unity), continuous communication among the members, and learning from failures. Similarly, escapism is a way of justifying failures and finds expression in teams in three ways: forgetting the failures, using a defense mechanism (by justifying the errors), and denial (not accepting responsibility).

Figure 1. ***A Conceptual Framework of "Failure Orientation" in Teams of Upstream Petroleum Industry***



Escapism, which leads to skirting failure, normally occurs in teams that expect hard decisions from top management from the failures. The escapist team refuses to face the challenge of finding the solution together and rather weighs on their incompetency. These findings refine the findings in earlier studies by researchers like Negi (2019), who examined the mediating or moderating role of self-efficacy in the relationship between stress and depression among students. The sub-factors (for operationalization) of "escapism" are (a) forgetting the failure, (b) the defense mechanism, and (c) denial.

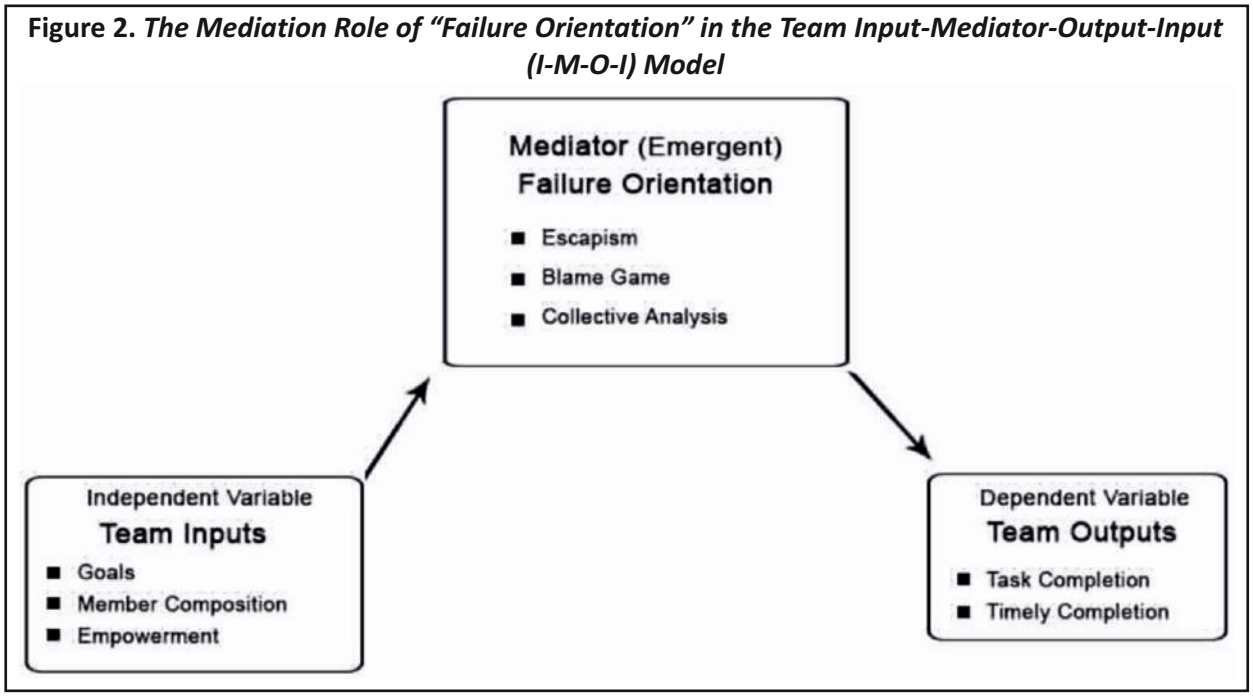
↳ **P3 :** "Escapism" negatively mediates the input-output relationship in multidisciplinary teams of the upstream petroleum industry.

Similarly, the sub-categories emerge from the coded data. For example, the sub-category defense mechanism (a factor of escapism) emerges from the codes "manipulation," "justification," and "protection" by the members of the multidisciplinary teams which comprise most of the jobs of the petroleum industry. With this approach, the framework has been built, part by part, from the coded data, excerpts of which have been brought out in the Appendix. Figure 1 refers to the whole structure of the developed framework. This is an original framework and is a significant addition to works on team classification (Mukherjee et al., 2017), which identifies two variables for classifying multidisciplinary teams in the upstream petroleum industry.

The Mediating Role of Failure Orientation

It is also found from the emerging patterns during the thematic analysis of the in-depth interviews that this new HR construct, "failure orientation" in teams, can be positioned as a mediator in the relationship between team inputs and team outputs. Failure orientation in teams explains (mediates) the correlation between the team input (s) and team outputs (s). This is diagrammatically explained in Figure 2 — the first two factors of 'failure orientation' in this conceptual framework, "escapism" and "blame game," negatively affect the mediation. In contrast, the third

Figure 2. ***The Mediation Role of "Failure Orientation" in the Team Input-Mediator-Output-Input (I-M-O-I) Model***



factor, "collective analysis," positively mediates the relationship between team input(s) and output(s). This serves as a conceptual refinement of the I-M-O-I model in the specific context of the upstream petroleum industry. As brought out in our literature review above, such a mediation role of failure has not been discussed in research literature related to teams. These findings on the mediating role of failures are an important improvement over studies by researchers like Peñarroja et al. (2017), who found that failure-related variables like social loafing fully mediated the effect of failure on group cohesion and partially mediated its effect on satisfaction with the team and the result.

↳ **P4 :** "Failure orientation" positively mediates the input-output relationship in multidisciplinary teams of the upstream petroleum industry.

From the above findings, we pitch a theoretical proposition as detailed in Figure 1.

Managerial Implications

To the best of our knowledge, this research has a very high originality value, being the first such study of failure orientation in the specific context of the upstream petroleum industry. The findings are significant for managerial applications in the economically-important upstream petroleum industry, where a majority of the oil-field work is done through multidisciplinary teams from diverse domain areas like engineering, drilling, geophysics, geology, reservoir, chemistry, and programmers. Optimum leveraging of failures in such multidisciplinary teams is vital for team success. The conceptual framework brings out the specific factors of failure orientation, laying the foundation for the measurement (operationalization) of this failure orientation in teams, and hence, helps use failure orientation to develop more effective teams.

Theoretical Enrichment

This study is a significant addition to team literature, developing a conceptual framework (model) for this new construct, "failure orientation," in multidisciplinary teams of the upstream petroleum industry. The specificities of the framework proposed in this paper will help academicians and researchers to prepare scales to measure failure orientation and, hence, go further in their respective quest for knowledge in the domain of team failures.

Limitations of Study and Scope for Further Research

The study is based on a purposive sample of team leads in the upstream petroleum company Oil and Natural Gas Corporation Limited (ONGC) and Oil India Limited (OIL). A bigger sample, including team leads of a few private sector enterprises in the petroleum industry (like Reliance and Cairn India), would give more insights into the fine-grained nuances of the subject, and some other classes of operational dimensions may emerge. Moreover, due to the lockdown during data collection, telephonic interviews were taken, which took off some benefits of face-to-face interviews.

Based on the above-referred three categories and sub-categories that emerged from the findings (Figure 1), we can conduct a factor analysis. For example, the factors behind the category blame game are : (a) communication gap, (b) compromise, and (c) ego issues. Based on the above factor groupings, we can tabulate the nine variables and the three broad categories which operationalize (measure) failures in teams in the petroleum industry. The findings correspond to each category, juxtaposing (mediated) with the impact of the other categories vis-a-vis the failure orientation in the teams.

Authors' Contribution

Debasish Mukherjee designed the open-ended questionnaire, collected the data through open-ended semi-structured interviews, and analyzed the qualitative data (coding and pattern identification) in consultation with the co-authors. He also prepared the manuscript. Dr. Nitin Arora provided the conceptual ideation behind the research and finalized the methodology. Finally, Dr. Subash Chandra Nath brought conceptual refinement and dovetailed the findings of similar studies of repute vis-à-vis the research problems.

Conflict of Interest

The authors certify that they have no affiliations with or involvement in any organization or entity with any financial or non-financial interest in the subject matter or materials discussed in the manuscript.

Human Participants

The data were collected from human elements (24 respondents) as per the prevalent ethical standards. Informed consent from all individual respondents was obtained. The Team Leads and Team Members (respondents) were identified by codes and not explicitly identified in this paper for research ethics. The details of the team leads and team members are available with the author and can be shared with interested researchers for genuine academic purposes.

Funding Acknowledgement

The authors received no financial support for the research, authorship, and/or for publication of this article.

References

Ahmad, I., Ullah, K., & Khan, A. (2022). The impact of green HRM on green creativity: Mediating role of pro-environmental behaviors and moderating role of ethical leadership style. *The International Journal of Human Resource Management, 33*(19), 3789–3821. https://doi.org/10.1080/09585192.2021.1931938

Akella, D. (2013). Creating successful teams. *Organization Management Journal, 10*(3), 208. https://doi.org/10.1080/15416518.2013.831707

Al-Nawasrah, M., & Alafi, K. K. (2021). The impact of human resource management practices on person-job fit: The mediating role of human resources agility at Jordanian airlines companies. *Global Journal of Economics and Business, 11*(1), 113–131. https://doi.org/10.31559/GJEB2021.11.1.9

Brown, L. (1993). Group work and the environment. *Social Work with Groups, 16*(1–2), 83–95. https://doi.org/10.1300/J009v16n01_08

Cannon, M. D., & Edmondson, A. C. (2005). Failing to learn and learning to fail (Intelligently): How great organizations put failure to work to innovate and improve. *Long Range Planning, 38*(3), 299–319. https://doi.org/10.1016/j.lrp.2005.04.005

Cross, T. (2011). HBR case study: A rush to failure? *Harvard Business Review*. https://hbr.org/2011/04/hbr-case-study-a-rush-to-failure

Gibson, C. B., Dunlop, P. D., & Cordery, J. L. (2019). Managing formalization to increase global team effectiveness and meaningfulness of work in multinational organizations. *Journal of International Business Studies, 50*, 1021–1052. https://doi.org/10.1057/s41267-019-00226-8

Giri, A., & Chatterjee, S. (2020). Impact of fluid team performance on strategic HRM: An empirical study in the organized retail sector of West Bengal. *Prabandhan: Indian Journal of Management, 13*(4), 25–42. https://doi.org/10.17010/pijom/2020/v13i4/151824

Guchait, P. (2016). The mediating effect of team engagement between team cognitions and team outcomes in service-management teams. *Journal of Hospitality & Tourism Research, 40*(2), 139–161. https://doi.org/10.1177/1096348013495698

Han, G., & Harms, P. D. (2010). Team identification, trust and conflict: A mediation model. *International Journal of Conflict Management, 21*(1), 20–43. https://doi.org/10.1108/10444061011016614

Hollenbeck, J. R., & Spitzmuller, M. (2012). Team structure: Tight versus loose coupling in task-oriented groups. In, S. W. J. Kozlowski (ed.), *The Oxford handbook of organizational psychology* (Vol. 2). Oxford Library of Psychology. https://doi.org/10.1093/oxfordhb/9780199928286.013.0023

Ilgen, D. R., Hollenbeck, J. R., Johnson, M., & Jundt, D. (2005). Teams in organizations: From input-process-output models to IMOI models. *Annual Review of Psychology, 56*, 517–543. https://doi.org/10.1146/annurev.psych.56.091103.070250

Kane, B., Toussaint, P., & O'Bryne, K. (2013). Informality and teamwork. In, *CSCW workshop on informality in medical work*. https://www.diva-portal.org/smash/get/diva2:1120263/FULLTEXT01.pdf

Khatri, P., Kaushik, N., & Kumari, P. (2022). Positive leadership: Qualitative leadership research using deductive pattern matching approach. *Prabandhan: Indian Journal of Management, 15*(4), 8–27. https://doi.org/10.17010/pijom/2022/v15i4/169247

Kozlowski, S. W., & Bell, B. S. (2003). Work groups and teams in organizations. In, W. C. Borman, D. R. Ilgen, & R. J. Klimoski (eds.), *Handbook of psychology: Industrial and organizational psychology* (Vol. 12, pp. 333–375). John Wiley & Sons Inc. https://psycnet.apa.org/record/2003-04689-014

Kurup, A. J., Pandey, S., & Charfare, M. (2020). Mediating effects of factors influencing career satisfaction of women academicians in higher education. *Prabandhan: Indian Journal of Management, 13*(4), 7–24. https://doi.org/10.17010/pijom/2020/v13i4/151823

McGrath, J. E., Arrow, H., & Berdahl, J. L. (2000). The study of groups: Past, present, and future. *Personality and Social Psychology Review, 4*(1), 95–105. https://doi.org/10.1207/S15327957PSPR0401_8

Mukherjee, D., Arora, N., & Kapoor, S. (2017). Team classification in upstream petroleum industry. *International Journal of Research in Management, Economics and Commerce, 7*(9), 22–24.

Nandana Prabhu, K. P., Rodrigues, L. L., & Pai, Y. (2019). Transformational leadership and workplace spirituality: A structural model of team effectiveness. *Prabandhan: Indian Journal of Management, 12*(4), 7–22. https://doi.org/10.17010/pijom/2019/v12i4/143344

Negi, A. S. (2019). The mediating and moderating role of self-efficacy in the relationship between stress and depression. *Prabandhan: Indian Journal of Management, 12*(9), 35–44. https://doi.org/10.17010/pijom/2019/v12i9/147128

Paul, J. Z. (2017). The neuroscience of trust. *Harvard Business Review, 95*(1), 84 – 90. https://hbr.org/2017/01/the-neuroscience-of-trust

Peñarroja, V., Orengo, V., & Zornoza, A. (2017). Reducing perceived social loafing in virtual teams: The effect of team feedback with guided reflexivity. *Journal of Applied Social Psychology, 47*(8), 424–435. https://doi.org/10.1111/jasp.12449

Prabhu, N., & Koodamara, N. K. (2022). Exploring shared leadership: Mediating roles of spirit at work and team trust. *Prabandhan: Indian Journal of Management, 15*(2), 24–39. https://doi.org/10.17010/pijom/2022/v15i2/168333

Sharma, H., & Yadav, R. (2018). The relationship between organizational justice and work engagement: Trust as a mediator. *Prabandhan: Indian Journal of Management, 11*(3), 50–61. https://doi.org/10.17010/pijom/2018/v11i3/122078

Shetty, A., & Basri, S. (2021). Mediating effect of attitude on the determinants of financial misselling of life insurance products in India. *Prabandhan: Indian Journal of Management, 14*(11), 41–57. https://doi.org/10.17010/pijom/2021/v14i11/166980

Singh, P., Upadhyay, R. K., & Srivastava, M. (2019). Mediating role of locus of control in the relationship between emotional intelligence and employee acceptance to change. *Prabandhan: Indian Journal of Management, 12*(9), 7–22. https://doi.org/10.17010/pijom/2019/v12i9/147126

Zhu, Y., & Chung, S. (2020). The impact of territorial behavior to employees' innovative performance: The mediating effect of knowledge sharing and the moderating effect of collectivism. *The Korean Academic Association of Business Administration, 33*(11), 1929–1958. https://doi.org/10.18032/kaaba.2020.33.11.1929

Appendix

Extract of Qualitative Analysis of Interview Transcripts

From the analysis, whose extract is reproduced below, we have coded the interview transcripts (in bold italics below), identifying the emerging patterns. We then arrived at the thematic analysis to develop a conceptual framework of team failure orientation (Figure 1 in the paper) in oil-field settings of teams in the upstream petroleum industry. Respondent codes have been shown here to preserve the identity of the respondents, as per the research ethics. The coding of the thematic analyses has been shown to trace the thematic patterns behind the analyses. The coding of the thematic analyses are as shown in Table A1.

Table A1. ***Coding of Thematic Analysis of Data***

Sl.	Code	Represents	Remarks
1	Simple Underline _____ e.g. Low Motivation	Data (Transcribed)	Qualitative textual data captured from interviews with team leaders and team members
2	First bracket ( ), e.g. (mistakes and failure)	Codes	First emerging patterns
3	Second bracket [ ], e.g., [compromise]	Sub-categories	Grouped Codes
4	Third bracket { } e.g. {futuristic learning}	Categories	Grouped Sub-categories
5	Separated by # e.g. #failure#	Variables	Team-related variables both in oil-field settings and office settings

Inclusion Criteria of Themes

↳ Themes brought out by at least one team leader as well as one Team member in one or more rounds unless excluded (as per exclusion criteria defined below)

Exclusion Criteria of Themes

↳ Themes which has been negated by at least one team leader (second round of data generation onwards)

Extracts of the Coding (Analysis)

(1) The orientation or approach of team members in dealing with failures was seen as a strong factor behind team energy, especially in oil-field settings. In the views of some senior team leaders, failures are a routine element in oil-field operations and a key dimension to exploring team energy.

> "… In the upstream petroleum industry, #failure# is the norm for exploration. Exploration teams fail (to discover oil and gas) in 60–70% of the cases, then succeed in 30–40% of the cases. […] The #failures# are, literally, the pillars of success as the {collective analysis} leads to {futuristic learning} from those failures, which are stepping stones to success. Hence #Team Failure Orientation# is a vital factor of team energy. One has to manage low motivation after failures that may otherwise hinder team energy…" (TeamLead21)

(2) The interview responses revealed that mistakes and failures are a part of the job in the upstream petroleum industry. Analyses of qualitative data (as shown below) reveal three possibilities associated with the notion of team failure orientation: {escapism}, {blame game}, and {analytic} approach.

↳ ***Escapism.*** Among the respondents, some opined that in many cases, escapism is a common approach adopted by some teams to hide failures, even in millennials, so that the team can escape the negative consequences. The respondents also opined that escapism is only one of the various approaches taken by teams after failure.

> "... What matters after a failure occurs is failure absorption, i.e., what does the team learn from the failure. …. In many cases, especially in cases where the oil field skills are found wanting in the team members, the team tries to {escape} from the consequences and hides the failures from the authorities so that they do not face the negative consequences. This {escapism} takes place when the risk-reward paradigm is a bit skewed towards the stick rather than the carrot. … One of the options that emerge is to [Forget the failure]. … Come to see it, {escapism} is a mediator of team inputs and outputs in this industry, explaining the relationship between team inputs and team outputs." (TeamLead3)

> "… In E&P companies in the public sector, the carrot and stick policy is sometimes imbalanced in favor of the stick. So, many team members prefer not to bring the failures out in the public domain and rather {escape} from the failures. Hence, many millennial team members are not motivated to discuss failures openly. … There is also a possibility that team members mold opinions of each other, resulting in weakening the work culture … [Defense mechanism] evolves to escape the failure." (TeamMember7)

> "In escapism, we also find that there is a scenario where the failures are justified. That's damaging as that weakens the possibility of the team winning the next time. … Justification also results in some members favoring a few others, which snowballs into distrust." (TeamMember 4)

A common response of many respondents has been that escapism is one of the worst possible scenarios for team energy. (The team refuses to face the challenge of finding the solution together and rather weighs on their incompetency). Respondents also viewed this escapism as the result of a non-balanced risk-reward policy in the organization. Moreover, the reason for this escapism has been found to reside in more focus on the stick than the carrot in the carrot and stick policy of public sector petroleum corporations; the resulting low motivation hinders team energy.

> "… If some team members are expecting hard decisions based on the success or failure of teams, it is seen that escapism is a natural route, especially in cases the results of the team are internal to the members and do not come out in public. [Denial] is a very probable [approach in such cases by the team members. Insecurity of the members leads to avoidance] of the team to face the failure." (TeamLead5)

> "... Another vital reason for escapism is that they have limited vital oil-field skills among team members. This want of skills and (ignorance) prohibits the team members from discussing failures openly, as some of the lesser-skilled ones are afraid the discussions may expose their lack of knowledge and skills. … Avoiding the issues jeopardize the project." (TeamMember9)

The above data shows that (avoidance) and (ignorance) are the two dimensions of [denial] that lead to {escapism}.

↳ ***Blame Game***. It is the scenario where the team owns the failure but does not want to take collective responsibility for the failure. The team members assign a skewed responsibility to some members while crediting the others for the good work, which ultimately did not help because of the few villains in the team. In other words, solidarity is wanting after failure.

> "It is sometimes common in a post-failure team to put the blame on a few team members. Whether the blame is right or wrong is a different issue, but the approach is significant vis-à-vis the energy of a team. Energy level after failure is vital. … What does the team do for survival is a good measure of Team Energy. Blaming one or two members for the failure dampens the energy in the team for the next episodes of action." (TeamLead06)
>
> "[Communication gap] is a vital element in this blame game. Misinformation and distrust make the workplace hostile. ... A friendly workplace atmosphere is always better to diffuse this {blame game} which is bad for team energy. (TeamMember5)

While the blame game is not the most sought-after situation after a team fails, some participants ranked it higher than escapism. One senior team leader said even if a team resorts to blaming, which is better than escaping, as some of the issues may be addressed in the former, one positive thing comes out of escaping mentality. A trustworthy workplace and friendly atmosphere help in this regard.

> "I would put the blame game approach higher in rank than escapism in failure orientations of teams, as in blaming others, some issues come up in the open which may get addressed. But if a team hides the failure, it's a [compromise], and the weaknesses remain, which will lead to more future failures." (TeamMember8)
>
> "A stable reporting hierarchy and work pyramid is a facilitator of good [communication], otherwise {blame game} may start taking shape. …" (Team Lead 7)
>
> "… [Ego issues] among members is a strict No-No. The team leader should see that there is no ego issue outstanding which may destabilize the team energy. Members should be treated as equals. ..." (TeamMember3)
>
> "Ethics is vital in team development. Unethical behavior destroys trust in a team. Equity is helpful in building professional relationships. … Logical Approach catalyzes team energy and vice versa." (Team Lead 1)

The above shows that [communication] plays a vital role in diffusing blame games. Otherwise, the (misunderstanding) and (misinformation) may result in members holding someone individually responsible, even in the cases of collective failure. A [compromise] is vital to resolve ego issues. Equal treatment of team members is a great positive element in building team energy. (Unethical behavior), (inequity) and (illogical approach) damages #team learning orientation# and is consequently detrimental to team energy.

↳ ***Collective Analysis.*** Respondents found this collective analysis approach best for team energy. This is the scenario when after a failure, all the team members sit down and introspect about what went wrong and the learnings for the next attempt.

> "As failures are a given in the upstream petroleum industry, each failure is a seed of learning and needs to be analyzed for the learning it throws up to the team. The team needs to [collectively learn the lessons behind the failure so that the future] incorporates the learnings and success come closer." (TeamLead7)
>
> "Whenever the team reflects on the reasons for failure collectively and is united in owning up to the failure, it grows as a team. This reflection needs [communication] and (healthy rapport). Being loyal and committed to work helps in analysis. The energy of the team builds up for the future." (TeamMember2)
>
> "… A futuristic approach is vital in analyzing failures and preparing for the next round of action in the upstream petroleum industry. [Collectivism] is critical as unless members unite, a [collective analysis] is not possible, especially as the job is multidisciplinary. Being in (continuous contact) also helps analysis through [communication]; negative feelings need to be managed." (Team Lead 15)

Hence, a [futuristic approach, communication, and collective] united attitude helps analysis of failures. (Formal communication) is vital for analyzing failures. This analysis also needs (healthy rapport) among team members, which is vital for success in upcoming ventures like drilling the next oil well and locating the correct zone for perforating where oil and gas can flow out comfortably.

> "If team members are united during the adversity, then only a collective analysis is possible. The unity will result in collectivism which is vital for a positive learning orientation in the team. Apart from the united approach, democratic decision-making leveraging the collective wisdom incorporating all viewpoints is important for the team to contribute to Team Energy." (Team Lead 2)
>
> "[Futuristic learning] enables a team to plan for future scenarios. The analytic approach to failure should accommodate environmental changes; there should not be any shocks to the members. All these lead to (long-term stability) and such a (visionary approach) results in the right #learning orientation# for the team. (Team Member 3)

From the above analysis of the qualitative inputs, it is seen the team should thus be (united), and use (collective and democratic decision-making) for a successful analysis of the failure. The team should examine different aspects of the project and develop a better strategy and structure for forthcoming operations. Each member should be assigned to the best of their abilities, followed by healthy competition and resourceful inspection from time to time.

About the Authors

Debasish Mukherjee is the Chief General Manager at ONGC, featured in the Limca Book of Records (2017) for his unique contribution to ONGC websites. He is pursuing research on HR at Amity University, Uttar Pradesh. A mechanical engineer from Jadavpur University, Kolkata, he is a Gold Medalist in both PG Diploma and MBA (IGNOU).

Dr. Nitin Arora is a Rekhi Singh Endowed Professor of Happiness at AIBS, Amity University, Uttar Pradesh. With a B.E. (Chemical), MBA, & PhD, he has more than 19 years of rich academic experience. He has published 30 research papers, 2 books and got 1 Positivity Award.

Dr. Subash Chandra Nath is Associate Dean & Professor in the Faculty of Management Studies at Sri Sri University, Bhubaneswar. He is M.Sc., MBA (Utkal), PGDCA, PGDHRM (IGNOU), and Ph.D. (Utkal). He has 19 years of experience in academics and 3+ years in Corporates.