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1. Operational Definition: The phenomenon where the stress state of one individual (e.g., a team lead or senior analyst) spreads rapidly through a team via verbal and non-verbal cues, degrading the collective cognitive performance and decision-making quality of the entire group.

2. Main Metric & Algorithm:

- **Metric: Stress Cascade Index (SCI).** Formula: SCI = Cross-Correlation(Stress_Metric_User_A, Stress_Metric_Team).

- **Pseudocode:**

python

```
def calculate_sci(team_id, start_date, end_date):
    # Calculate a daily stress metric for each team member (e.g., using CSS from 7.2 or t
    team_stress_levels = {}
    for member in get_team_members(team_id):
        css = calculate_css(member.id, start_date, end_date) # From 7.2
        team_stress_levels[member.id] = css

    # Calculate the team's average stress level per day
    team_avg_stress = np.mean(list(team_stress_levels.values()))

    # Calculate correlation of each member's stress with the team average
    sci_scores = {}
    for member, stress in team_stress_levels.items():
        # This is a simplification. A real implementation would use time-series data.
        correlation = np.corrcoef([stress], [team_avg_stress])[0, 1]
        sci_scores[member] = correlation

    # Identify the individual with the highest correlation (the potential contagion source)
    max_sci_member = max(sci_scores, key=sci_scores.get)
    return max_sci_member, sci_scores[max_sci_member]
```

- **Alert Threshold:** SCI > 0.8 for a key individual (e.g., team lead) over a one-month period.

3. Digital Data Sources (Algorithm Input):

- **HR System:** team_membership.
- All data sources from other stress metrics (7.1-7.8) aggregated at the team level.

4. Human-To-Human Audit Protocol: Team facilitator observation during incidents or high-pressure periods. Anonymous team climate surveys asking: “How does the mood of your team lead affect your own stress levels?”

5. Recommended Mitigation Actions:

- **Technical/Digital Mitigation:** Create team-level dashboards that monitor aggregate stress metrics to identify teams at risk.
- **Human/Organizational Mitigation:** Provide leadership training for senior analysts and team leads on emotional intelligence and managing team dynamics under pressure.
- **Process Mitigation:** Institute structured briefings and debriefings (“hotwashes”) to manage emotions and perceptions before and after stressful events.