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Emotional Contagion: How Stress in One Person Affects the Mood and Behaviour of Others

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Abstract: ***Emotional contagion refers to the process through which people's emotions may be influenced by the emotional states and expressions of others. This study examined self-reported responses to stress in other people and explored their association with perceived stress. A quantitative, cross-sectional online questionnaire was completed between October 25 and 27, 2026. Of 33 submissions, 32 participants consented and were included in the emotional-response analysis; 31 had sufficient responses for the preliminary perceived-stress analysis. The questionnaire included 15 researcher-developed statements about responses to others' stress and 10 perceived-stress questions resembling the Perceived Stress Scale–10 (PSS-10). Descriptive results showed that 90.6% of participants agreed or strongly agreed that they could sense stress in people around them, while 75.0% reported that stress in family, workplace, or educational settings affected their emotional well-being. An exploratory Spearman correlation indicated a positive association between the emotional-response composite and perceived-stress scores ($r_s = .526$, $p = .002$, $n = 31$). This association must be interpreted cautiously because the emotional-response questionnaire was not validated and the exact perceived-stress instrument requires confirmation. Findings provide preliminary descriptive insight but do not establish causation.***

Keywords: emotional contagion, stress, mood, emotional well-being, perceived stress

1. Introduction

Emotions are shaped not only by individual experiences but also by interactions with family members, friends, colleagues, and other people. A person may feel anxious when a friend is worried, become tense in a stressful workplace, or feel calmer around relaxed people. Emotional contagion refers broadly to the influence that others' emotional expressions and states may have on one's own emotional experience. Hatfield et al. (1993) described how people may imitate and synchronise with others' facial expressions, vocal expressions, postures, and other cues, potentially contributing to related emotional states.

Stress can affect mood, concentration, communication, and behaviour. Observable signs such as irritability, anxious speech, withdrawal, or difficulty concentrating may influence people who encounter them. However, noticing another person's stress, empathising with that person, sharing a stressful situation, and experiencing emotional contagion are distinct processes. Some people may become distressed, while others recognise the distress but maintain emotional balance.

Li et al. (2023) examined stress in a community network, and Nitschke and Bartz (2023) reviewed the relationship between acute stress and empathy. This study explores how participants report responding when people around them experience stress and whether these responses are associated with perceived stress.

1.1 Theoretical Background

Emotional Contagion Theory
Hatfield et al. (1993) proposed that people may imitate and synchronise with others' emotional expressions, which can contribute to experiencing related emotions. This perspective offers a framework for examining reported mood changes around stressed people, although self-report alone cannot establish that contagion occurred through this mechanism.

Transactional Model of Stress and Coping
Lazarus and Folkman (1984) explained stress in terms of the relationship between individuals and their environments, including how people appraise demands and available coping resources. Another person's stress may be interpreted as a warning, a request for support, or a sign that the environment is difficult to manage. Such appraisals may shape emotional responses.

Social Cognitive Theory
Bandura's (1986) social cognitive theory emphasises reciprocal influences between personal factors, behaviour, and the environment. Observing distress may lead people to adjust how they communicate or behave. These theories guide interpretation but were not directly tested in this study.

1.2 Aim and Objectives

The aim was to examine self-reported emotional responses to stress in others and explore their association with perceived stress. The objectives were to describe awareness of others' stress; summarise reported effects on mood, well-being, concentration, and behaviour; describe perceived-stress scores; and explore the association between an emotional-response composite and perceived stress.

1.3 Hypotheses

H_0: There is no statistically significant association between self-reported emotional responses to stress in others and perceived stress.
H_1: There is a statistically significant association between self-reported emotional responses to stress in others and perceived stress.

2. Review of Literature

Hatfield et al. (1993) provided a theoretical account of emotional contagion based on imitation and synchronisation of emotional expressions. Barsade (2002) examined emotional contagion in group settings and its influence on

group behaviour, showing the relevance of emotional processes to group interactions. However, findings from particular experiments cannot automatically be generalised to all social contexts.

Fowler and Christakis (2008) studied the spread of happiness in a large social network using longitudinal data. Although the focus was happiness rather than stress, the study demonstrated the relevance of social networks for emotional experiences. Li et al. (2023) examined the spread of stress through a community network, a more direct connection to the current topic.

Nitschke and Bartz (2023) reviewed acute stress and empathy, highlighting a complex rather than uniform relationship. Emotional discomfort or worry in response to another person may reflect empathy, personal distress, shared concerns, or other processes. Michalec et al. (2025) reviewed emotional-contagion research involving human participants and identified methodological variation, including measurement issues. These concerns are important when interpreting findings from a researcher-developed questionnaire.

2.1 Research Gap

Existing studies examine emotional contagion, group emotion, social networks, stress, and empathy using different designs and outcomes. The present exploratory study provides a descriptive account of reported responses to stress in family, workplace, educational, and other social settings. It also explores whether these responses are associated with perceived stress. It does not aim to validate a new scale or establish that stress is causally transmitted.

3. Methodology

3.1 Research Design and Participants

A quantitative, cross-sectional questionnaire design was used. Data were collected through an online Google Form between October 25 and 27, 2026. There were 33 submissions; one respondent did not consent and was excluded. The demographic and emotional-response analyses included 32 consenting participants. One consenting participant left most perceived-stress items unanswered, leaving 31 cases for the preliminary perceived-stress analysis. The exact recruitment procedure and sampling method should be confirmed from the researcher's records.

3.2 Instruments

The demographic sheet recorded consent, age group, gender, and occupation. The 15-item emotional-response questionnaire was researcher-developed and covered awareness of stress, mood, discomfort, concentration, irritability, worry, emotional well-being, interpersonal behaviour, and emotional balance. Responses ranged from strongly disagree to strongly agree on a five-point scale. The measure has not been formally validated, and no reliability coefficient or established interpretation is available.

The second questionnaire contained 10 questions about the previous month, with response options from never to very often. Its content resembles the PSS-10 introduced by Cohen et al. (1983), but the exact version and wording used here have not been confirmed. This article therefore refers to it as a perceived-stress questionnaire rather than definitively claiming that the standard PSS-10 was administered.

3.3 Procedure and Ethics

Participants completed the online questionnaire after responding to a voluntary consent question. The non-consenting submission was excluded. The researcher should confirm institutional ethics requirements, confidentiality procedures, data storage, and whether formal approval or exemption was required and obtained. The available information does not establish that formal ethics approval was obtained.

3.4 Statistical Analysis

Frequencies and percentages summarised demographics and item responses. Descriptive statistics were calculated for the preliminary perceived-stress total. An exploratory Spearman correlation assessed the association between the emotional-response composite and perceived-stress scores. Item 14, which concerns maintaining emotional balance despite others' stress, was reverse-scored. The composite and correlation are provisional because the emotional-response questionnaire is unvalidated and the stress instrument's exact version is unconfirmed.

4. Results

4.1 Demographic Characteristics

Thirty-two consenting participants were included. The largest age group was 26–35 years (46.9%); 65.6% were female, and 59.4% reported being employed.

Characteristic	Category	n	%
Age	18–25 years	9	28.1
	26–35 years	15	46.9
	36–45 years	6	18.8
	46 years and above	2	6.3
Gender	Female	21	65.6
	Male	11	34.4
Occupation	Employed	19	59.4
	Student	4	12.5
	Self-employed	4	12.5
	Homemaker	3	9.4
	Unemployed	1	3.1
	Other	1	3.1

Note. Percentages may not total 100 because of rounding.

These characteristics describe the sample only. The small sample and unconfirmed representativeness mean that findings should not be generalised to a wider population without further evidence.

4.2 Emotional Responses to Stress in Others

Table 2 summarises participants who agreed or strongly agreed with each statement. Item 14 describes maintaining

emotional balance and is opposite in direction to the other stress-response items.

Statement (abbreviated)	n	%
Can sense stress in people around them	29	90.6
Social-setting stress affects emotional well-being	24	75.0
Feel uncomfortable when someone close is worried	23	71.9
Change interaction when others appear stressed	22	68.8
Feel calmer when others are calm	22	68.8
Others' emotions influence behaviour	19	59.4
Being around a stressed person affects mood	18	56.3
Worry about the same things when others share concerns	17	53.1
Others' stress affects concentration	15	46.9
Stress even when situation does not directly involve them	14	43.8
Begin feeling stressed when someone nearby is stressed	14	43.8
Remain stressed after time alone	14	43.8
Hard to remain positive when others are negative	13	40.6
Become more irritable when others are stressed	10	31.3
Maintain emotional balance despite others' stress	21	65.6

The most frequently endorsed statement was the ability to sense stress in others: 29 participants (90.6%) agreed or strongly agreed. Twenty-four (75.0%) reported that stress in family, workplace, or educational settings affected emotional well-being. Twenty-three (71.9%) reported emotional discomfort when someone close was worried, and 22 (68.8%) said they changed their interactions when others appeared stressed. The same number reported feeling calmer when others were calm.

Eighteen participants (56.3%) reported that being around a stressed person affected their mood, and 17 (53.1%) sometimes worried about the same things when another person shared concerns. Irritability was less frequently endorsed (31.3%). At the same time, 21 participants (65.6%) reported that they could maintain emotional balance despite others' stress. The pattern therefore reflects varied responses rather than uniform distress.

4.3 Perceived-Stress Scores

Statistic	Value
Mean	19.39
Standard deviation	5.65
Median	20
Minimum	6
Maximum	31

Note. Preliminary values use PSS-10-style scoring and must be verified against the exact instrument before being interpreted as standard PSS-10 scores.

The preliminary mean was 19.39 (SD = 5.65), with a median of 20 and scores ranging from 6 to 31. These statistics describe the available responses only. They should not be compared with published norms or used to categorise stress until the instrument version and scoring are confirmed.

4.4 Exploratory Correlation

A Spearman rank-order correlation between the 15-item emotional-response composite (with item 14 reverse-scored) and the preliminary perceived-stress total indicated a positive association, $r_s = .526$, $p = .002$, $n = 31$. Higher values on the exploratory emotional-response composite tended to occur alongside higher perceived-stress scores.

This result is provisional because the emotional-response questionnaire was not validated and the exact perceived-stress version is unconfirmed. The correlation does not establish that one person's stress caused another person's stress, nor does it identify the direction of influence.

5. Discussion

5.1 Interpretation of Findings

The results suggest that participants commonly noticed stress in others and perceived their social environments as relevant to their emotional well-being. Recognising stress is not the same as experiencing the same emotional state, so the high awareness figure is not direct evidence of contagion.

The report that social-setting stress affected well-being is broadly compatible with Lazarus and Folkman's (1984) transactional model, which emphasises how individuals appraise environmental demands. However, appraisal was not directly measured. Reported emotional discomfort and behavioural changes are relevant to Hatfield et al.'s (1993) framework, but may also reflect empathy, concern, shared stressors, or personal stress.

The finding that 65.6% reported being able to maintain emotional balance is important: noticing others' distress may coexist with perceived emotional regulation. The positive exploratory correlation suggests that stronger reported responses to others' stress tended to accompany higher perceived stress. Possible explanations include greater sensitivity among people who are already stressed or shared factors affecting both measures. The cross-sectional design cannot distinguish these possibilities.

5.2 Comparison with Previous Research

The results are conceptually consistent with Hatfield et al.'s (1993) account of emotional contagion and Barsade's (2002) research on emotional processes in groups. They also relate to Li et al.'s (2023) investigation of stress in community networks. However, the present study uses a small self-report sample rather than experimental or longitudinal network data and therefore cannot establish stress transmission.

Nitschke and Bartz (2023) emphasised the complexity of the relationship between acute stress and empathy, supporting caution about treating worry, discomfort, and awareness as one process. Michalec et al. (2025) identified measurement variation in emotional-contagion research, which is relevant because the present emotional-response tool was researcher-developed.

5.3 Implications

The findings suggest that participants commonly perceive stress in their social environments as emotionally relevant. Awareness of these responses may encourage supportive communication and attention to emotional boundaries in

families, workplaces, and educational settings. Individuals may benefit from recognising others' distress while distinguishing it from their own feelings. These are tentative implications: no intervention was tested, and the study does not establish the effectiveness of a specific strategy.

5.4 Limitations

- The sample was small (32 consenting participants; 31 complete perceived-stress cases).
- Self-report may be affected by recall, individual interpretation, and response tendencies.
- The 15-item emotional-response questionnaire was not validated; its reliability and construct validity are unknown.
- The perceived-stress questions resemble the PSS-10, but their exact source and scoring require confirmation.
- The cross-sectional design cannot establish causation or the direction of an association.
- The recruitment method and representativeness require clarification before generalising.

5.5 Future Research

Future studies should recruit larger and more diverse samples and use validated measures of emotional contagion and perceived stress. Researchers should verify the exact stress instrument before data collection and test reliability and validity for any newly developed measure. Longitudinal studies could examine whether changes in one person's stress predict later changes in another person's emotional state. Further work could examine relationship closeness, emotion regulation, empathy, and context while distinguishing contagion from shared stressors.

6. Conclusion

Most participants reported being able to sense stress in people around them, and many said that stress in family, work, or educational settings affected their emotional well-being. Participants also described mood changes, emotional discomfort, and behavioural adjustments, although many reported maintaining emotional balance. An exploratory analysis found a positive association between the emotional-response composite and perceived-stress scores. Because the sample was small, the emotional-response questionnaire was unvalidated, and the perceived-stress instrument requires verification, these results are preliminary. Larger studies using validated measures and stronger designs are needed to clarify the relationship and test whether any causal influence exists.

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[10] *Formatting note: References are arranged alphabetically. Apply double spacing if required by your university's APA 7 submission rules.*

Supplementary Material A: Emotional-Response Questionnaire

The following statements were used in the researcher-developed questionnaire. Participants selected one response on a five-point scale: strongly disagree, disagree, neither agree nor disagree, agree, or strongly agree. This tool has not been validated and should not be presented as an established scale.

1) When someone around me is stressed, I also begin to feel stressed.
2) I can sense when people around me are experiencing stress.
3) Being around a stressed person affects my mood.
4) I feel emotionally uncomfortable when someone close to me is worried or anxious.
5) When people around me are calm, I tend to feel calmer too.
6) Other people's stress makes it difficult for me to concentrate on my tasks.
7) I become more irritable when people around me are stressed.
8) I sometimes feel stressed even when the stressful situation does not directly involve me.
9) The emotions of people around me influence how I behave.
10) I find it difficult to remain positive when people around me are feeling negative.

11) When someone shares their worries with me, I sometimes begin worrying about the same things.
12) Stress in my family, workplace, or educational environment affects my emotional well-being.
13) I sometimes change the way I interact with others because they appear stressed.
14) I can maintain my emotional balance even when people around me are stressed.
15) After spending time with a stressed person, I sometimes continue feeling stressed even when I am alone.

Supplementary Material B: Perceived-Stress Questions

Response options: Never, Almost never, Sometimes, Fairly often, Very often. The questions below are reproduced from the online form. Confirm the exact source/version before identifying this as the standard PSS-10.

1) In the last month, how often have you been upset because of something that happened unexpectedly?
2) In the last month, how often have you felt that you were unable to control the important things in your life?
3) In the last month, how often have you felt nervous and "stressed"?
4) In the last month, how often have you felt confident about your ability to handle your personal problems?
5) In the last month, how often have you felt that things were going your way?
6) In the last month, how often have you found that you could not cope with all the things that you had to do?
7) In the last month, how often have you been able to control irritations in your life?
8) In the last month, how often have you felt that you were on top of things?
9) In the last month, how often have you been angered because of things that were outside of your control?
10) In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?

Research Transparency Notes

The dataset contained 33 submissions; one non-consenting response was excluded. Descriptive analyses used 32 consenting participants, while the preliminary perceived-stress and correlation analyses used 31 cases. Item-level percentages represent participants who selected agree or strongly agree, not population prevalence.

The preliminary perceived-stress summary was M = 19.39, SD = 5.65, median = 20, range = 6–31 (n = 31), calculated using PSS-10-style scoring with items 4, 5, 7, and 8 reverse-scored. This procedure must be verified against the exact questionnaire version. The exploratory correlation (r_s = .526, p = .002, n = 31) should be reviewed with the project guide because the emotional-response composite is unvalidated.

Before submission, confirm the recruitment method, institutional ethics requirements, exact perceived-stress instrument and scoring, and whether the exploratory composite analysis is appropriate. Ensure the final references match all in-text citations.