The Impact of Academic Stress on Intrinsic Motivation in Adult E-Learners

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Abstract
The global expansion of e-learning has provided flexibility for adults managing multiple life roles, yet this shift introduces specific academic stressors related to self-discipline and time management. This study investigates the critical relationship between academic stress and intrinsic motivation, the internal drive essential for deep, sustained learning. Utilizing a quantitative, correlational design, data were collected from 32 adult e-learners enrolled in university psychology courses, employing modified versions of the Academic Stress Scale and the Intrinsic Motivation Inventory (IMI). The analysis revealed a very weak, statistically non-significant positive correlation between academic stress and intrinsic motivation, r (30) =.09, p =.641, 95\% CI [-.27,.42]. This outcome supports the null hypothesis, suggesting that academic stress does not meaningfully impair the intrinsic motivation of this sample of adult e-learners, likely due to robust self-regulation strategies and motivation rooted in high perceived value and usefulness of the educational path.

Keywords
Academic Stress, Intrinsic Motivation, Adult E-Learners, E-learning, Self-Determination Theory, Distance Learning, Correlational Study.

I. Introduction

The rapid growth of E- learning platforms across the world has revolutionaries the idea of learning and upskilling for all the age groups, especially adults who are juggling many roles and determined for learning and growing (Semmar, 2006). In recent years online learning platforms have given a several benefits like schedule flexibility, vast resources, cost effectiveness and personalized touch, at the same time adults with many responsibilities in arms, the academic stress has become a major concern across all the adult e- learners, who are balancing many task like e-course requirements with personal and professional obligation, creating an academic stress which may impact the motivation, especially intrinsic motivation - the internal drive to learn for personal interest and satisfaction.

II. Problem Statement

Adult learners face new academic challenges as e-learning platforms become more widely used, unlike traditional classroom settings, e-learning frequently necessitates increased self-discipline, time management skills, and the ability to navigate technological platforms independently, these demands can increase academic stress, potentially influencing learners' intrinsic motivation. Intrinsic motivation, defined as a learner's natural interest and enjoyment in the learning process, is required for deep learning and long-term retention, academic stress, on the other hand, can negatively affect this internal motivation, resulting in poor performance, disengagement, or even withdrawal from e-learning programs, despite its importance, little research has been conducted on the relationship between academic stress and intrinsic motivation among adult learners in e-learning settings, particularly at a time when online education is becoming increasingly important for personal and professional development. This

study aims to address this gap by investigating the relationship between academic stress and intrinsic motivation in adults who use e-learning environments.

III. Literature Review

Research on academic stress and motivation is extensive; however, studies directly examining their relationship among adult e-learners in online education remain limited. Nguyen and Chen (2023) suggest that academic stress may influence self-determined motivation, which is essential for effective learning.

Nguyen and Chen (2023) investigated the relationships among information system success, perceived stress, intrinsic motivation, and self-regulated learning in online learning environments. Their findings showed that high-quality learning systems significantly enhance intrinsic motivation and self-regulated learning. Although perceived stress was common, it did not significantly affect intrinsic motivation or self-regulation, indicating that system effectiveness and learner characteristics may buffer stress effects. Using second-order structural equation modelling, the study adhered to APA data analysis standards, though reliance on self-reported data may introduce subjective bias (Nguyen & Chen, 2023).

Supporting these findings, Semmar (2006) demonstrated that adult distance learners with strong self-efficacy, effective self-regulation, and high motivation were more likely to achieve academic success. Using a quantitative correlational design, the study found significant associations between self-efficacy, self-regulation, motivation, and academic performance. While methodologically sound and APA-compliant, the study did not distinguish between intrinsic and extrinsic motivation or establish causal relationships (Semmar, 2006).

Bonk and Lee (2017) examined self-directed informal learners in MOOCs using a mixed-methods approach. Their findings highlighted diverse motivations, challenges, and learning outcomes, offering both generalizable patterns and contextual insights. However, the study did not address how motivation changes over time or how ongoing academic stress affects adult learners in structured e-learning environments (Bonk & Lee, 2017).

Haruna et al. (2021) explored the relationship between academic stress and motivation among undergraduate students using a cross-sectional survey design. Although the study identified correlations between stress and motivation and adhered to APA reporting standards, its focus on a traditional undergraduate population limits its applicability to adult e-learners in online settings (Haruna et al., 2021).

Deci et al. (2001) provided a foundational theoretical framework by examining how extrinsic rewards affect intrinsic motivation. Their meta-analytic findings suggest that externally controlled rewards can undermine intrinsic motivation, though contextual and long-term effects remain unclear.

Park et al. (2012) further demonstrated complex relationships among stress, motivation, and academic performance, highlighting the role of emotional factors, though their findings were based on medical students rather than adult e-learners.

IV. Gaps in the Literature

Overall, the literature indicates that academic stress can influence motivation, yet its specific impact on intrinsic motivation among adult e-learners remains unclear. Existing studies often focus on traditional settings, undergraduate populations, or technological factors without fully addressing the unique pressures of adult online learning. The roles of stress type, self-efficacy, self-regulation, and long-term motivational resilience remain insufficiently explored. These gaps underscore the need for focused research examining the relationship between academic stress and intrinsic motivation among adult e-learners.

V. Research Question and Hypothesis

The research question proposed is: *How does academic stress impact intrinsic motivation in adults engaged in e-learning environments?*

The rise of e-learning platforms has transformed adult learners' educational opportunities by providing flexibility and access to a variety of learning resources. However, the self-directed nature of e-learning can create new stressors, such as juggling academic responsibilities with personal and professional obligations. Academic stress, defined as feelings of pressure and overload, can have a significant impact on a learner's motivation, particularly intrinsic motivation (Wang et al., 2019).

Academic stress affects intrinsic motivation in e-learning settings, and it is critical for developing strategies to assist adult learners. By investigating this relationship, the study hopes to shed light on how to improve e-learning experiences, ensuring that learners remain motivated and achieve their educational goals despite the obstacles they face.

Null Hypothesis (HO)

The proposed Null Hypothesis (HO) is as follows: There is no significant relationship between academic stress and intrinsic motivation in adults engaged in e-learning environments

Alternate Hypothesis (H1)

The proposed Alternate Hypothesis (H1) is as follows: There is a significant relationship between academic stress and intrinsic motivation in adults engaged in e-learning environments. These hypotheses provide a structured overview for investigating the relation between academic stress and intrinsic motivation in adult e-learning.

VI. Variables

The independent variable in this study is academic stress, which is defined as the psychological strain caused by workload, deadlines, and e-learning-specific challenges. It will be measured using an academic Stress Scale developed by Rajendran and Kaliappan (1990), which was modified to reflect the specific challenges faced by adult e-learners. Academic stress is central to this study because it has a significant impact on learning experiences in e-learning contexts, particularly for adults with multiple responsibilities (Rustam & Tentama, 2020).

The dependent variable is intrinsic motivation, which refers to the internal desire to learn for personal fulfillment and curiosity rather than for external rewards. This will be evaluated using a tool known as the Intrinsic Motivation Inventory (IMI), which measures dimensions such as interest, enjoyment, and perceived competence, by examining these variables, the study hopes to discover how academic stress affects the intrinsic motivation of adult learners in e-learning settings, providing insights into how to improve educational practices (Ryan et al., 1987).

VII. Methods

1. Participant

Participants (N = 32) were recruited using a convenience sampling method through the Qualtrics platform and consisted of students enrolled in Southern New Hampshire University (SNHU) PSY-I and PSY-II courses. The sample was predominantly female (81.25%, n = 26), with male participants comprising (18.75%, n = 6). Regarding employment status, (56.25%, n = 18) reported working full-time, (28.12%, n = 9) part-time, and (15.62%, n = 5) were unemployed. In terms of professional experience, (40.62%, n = 13) identified as mid-level professionals, (28.12%, n = 9) as senior-level, and (25%, n = 8) as entry-level. Age data revealed that (40.62%, n = 13) were young adults and (21.88%, n = 7) were middle-aged followed by older adults (37.50%, n = 12).

2. Materials

The study employed a composite online survey designed to examine the impact of academic stress on intrinsic motivation in adult learners within e-learning environments. Two standardized instruments were adapted to construct the survey content. The first was the Academic Stress Scale developed by Rajendran and Kaliappan (1990), which was modified to reflect the specific challenges faced by adult e-learners. These modifications included language and item framing relevant to digital coursework, time management, and the complexities of balancing academic responsibilities with work and family obligations. This scale was selected for its prior validation in measuring academic stress and its adaptability to different learning populations (Rajendran & Kaliappan, 1990).

The second instrument used was the Intrinsic Motivation Inventory (IMI), which is a multidimensional tool that captures key aspects of intrinsic motivation such as interest/enjoyment, perceived competence, value/usefulness, and pressure/tension (Ryan, 1982; McAuley, Duncan, & Tammen, 1987). These subscales were particularly relevant to the research question, as they align with core components of self-determined motivation in adult learners navigating asynchronous, online education. The IMI items were carefully adapted to mirror the e-learning context while maintaining the validity and reliability of the original constructs (Ryan, Koestner, & Deci, 1991).

Both instruments utilized a 7-point Likert-type response scale, enabling nuanced responses to each item. Special attention was given to ensure that the language used in the survey was accessible to adults aged 25–45, accounting for a wide range of educational, occupational, and digital literacy backgrounds. This consideration helped ensure that the instruments effectively captured the lived experiences of the target population and addressed the central research question.

3. Procedure

Data for this study were collected using an online survey hosted on the Qualtrics platform. The survey included modified versions of two standardized instruments, the Academic Stress Scale (Rajendran & Kaliappan, 1990) and the Intrinsic Motivation Inventory (IMI; Ryan, 1982; McAuley, Duncan, & Tammen, 1987).

These instruments were adapted for adult e-learners by modifying item wording to reflect the context of online education, such as referencing digital coursework, asynchronous deadlines, and work-life balance concerns. The survey was distributed via the student lounge forums for PSY-I and PSY-II courses at Southern New Hampshire University, where it remained open for one to two weeks. Participants were informed of the voluntary nature of the study and assured anonymity and confidentiality.

The survey began with an informed consent form, followed by demographic questions (age, gender, employment status), and then the scale items presented in randomized order to reduce response bias. Each item was rated on a 7-point Likert scale, ranging from "not at all true" to "very true," allowing for nuanced measurement of subjective experiences related to academic stress and intrinsic motivation. This digital and asynchronous mode of administration was chosen to ensure accessibility and convenience for adult learners managing diverse responsibilities, consistent with best practices in online psychological research (Wright, 2005).

VIII. Results

1. Raw data

The raw data collected from 32 participants were reviewed and prepared in SPSS for statistical analysis. Each variable, including demographic and scale-based items, was labelled and coded to align with the scoring systems of the respective instruments.

Demographic variables such as gender were coded numerically (1 = Male, 2 = Female), while employment status was coded as 1 = Full-time, 2 = Unemployed, and 3 = Part-time. Age

was grouped and coded as follows: 1 = 25–30, 2 = 31–35, 3 = 36–40, 4 = 41–45, and 5 = 45 and above.

For the Academic Stress Scale, responses were scored on a 5-point Likert scale (0 = No Stress to 4 = Extreme Stress). The scale includes 40 items, categorized into five domains with 8 items each (concentration, faculty interaction, environment), and each participant's total academic stress score was calculated by summing the scores across all 40 items (Rajendran & Kaliappan, 1990). The resulting composite score reflected the overall level of academic stress for each participant.

For the Intrinsic Motivation Inventory (IMI), items were rated on a 7-point Likert scale ranging from 1 = Not at all true to 7 = Very true. As per the IMI scoring guide, out of eighteen items, five items required reverse scoring. These items were recorded in SPSS by subtracting the participant's score from 8 (a score of 2 was recoded as 6), so that higher scores consistently indicated greater intrinsic motivation (Ryan, 1982).

Subscale scores such as interest/enjoyment, perceived competence, and pressure/tension were then computed by averaging the relevant item scores for each subscale (McAuley, Duncan, & Tammen, 1987).

No additional recoding was needed for demographic data or for other IMI or stress items, as category distributions and response frequencies were adequate. This systematic coding, recoding, and scoring process ensured accurate and consistent data preparation for further statistical analysis (Field, 2018).

2. Descriptive statistics

The demographic characteristics of the participants are presented in Table 1. The sample consisted predominantly of female participants, with 81.25% (n = 26) identifying as female and (18.75%, n = 6) as male, indicating a gender imbalance in the study population. Employment status was varied, with the majority employed full-time (56.25%, n = 18), followed by part-time employees (28.12%, n = 9), and a smaller proportion being unemployed (15.62%, n = 5).

Regarding professional experience, mid-level professionals represented the largest group (40.62%, n = 13), while senior (28.12%, n = 9) and entry-level (25.00%, n = 8) professionals comprised the remainder of the sample. In terms of age, young adults were the largest group (40.62%, n = 13), followed by older adults (37.50%, n = 12) and middle-aged participants (21.88%, n = 7).

This distribution reflects a relatively diverse sample in terms of employment, experience, and age, though the gender distribution is notably skewed toward females (See Table 1).

Table 1

Demographic Characteristics of Participants (N = 32)

Variable	Category	Frequency	Percentage
Gender	Female	26	81.25
	Male	6	18.75
Employment	Full-time	18	56.25
	Part-time	9	28.12
	Unemployed	5	15.62
E-learning experience	Mid-level	13	40.62
	Senior	9	28.12
	Entry-level	8	25.00
Age	Young adults	13	40.62
	Middle-aged	7	21.88
	Older adults	12	37.50

Note. Percentages may not total 100 due to rounding.

3. Interval-Level Variables

Descriptive statistics for interval-level variables are presented in Table 2. The mean score for intrinsic motivation (IMI) was 4.36 (SD = 0.66) on a 1–7 Likert scale, indicating that participants generally reported moderate-to-high levels of intrinsic motivation. The academic stress score (ACA) had a mean of 2.78 (SD = 0.81), suggesting moderate levels of academic stress within the sample. The standard deviations indicate moderate variability in both intrinsic motivation and academic stress among participants (See Table 2).

Table 2

Descriptive Statistics for Interval Variables

Variable	Mean	SD
Academic Stress (ACA)	4.36	0.66
Intrinsic Motivation (IMI)	2.78	0.81

Note. IMI = Intrinsic Motivation Inventory; ACA = Academic Stress; SD = Standard deviation Scores range from 1 (lowest) to 5 (highest).

4. Pearson product-moment correlation

Based on the survey data, the variables of intrinsic motivation and academic stress are both continuous and measured at the interval/ratio level. To examine the relationship between these two variables, it is important to select an appropriate statistical test. According to established statistical guidelines (Field, 2018; American Psychological Association, 2020), the Pearson correlation coefficient is most suitable when both variables are continuous, the relationship between them is linear, both distributions are approximately normal, and there are no significant outliers. A review of the descriptive statistics for IMI and ACA indicated that both variables are reasonably normally distributed. The sample size (N = 32) is sufficient for a correlation analysis, although it remains relatively small.

In contrast, other statistical tests were considered but deemed less appropriate for addressing the current research question. For instance, independent samples t-tests or ANOVA are designed to compare mean differences between groups, such as comparing intrinsic motivation scores among predefined categories of academic stress (low vs. high). However, in this study, both variables are continuous, and there is no categorical grouping variable. Therefore, these tests would require artificially creating categories from continuous stress scores, which may result in loss of information and statistical power (MacCallum et al., 2002).

Additionally, linear regression analysis, while capable of modeling predictive relationships, is not necessary in this context since the primary goal is to explore the association, not to predict one variable from another.

Pearson's correlation is more parsimonious and directly suited for identifying the strength and direction of a bivariate relationship (Field, 2018). Finally, non-parametric tests like Spearman's rho may be used when assumptions of normality are violated. However, Pearson's *r* is robust against mild violations of normality, especially in sample sizes over 30 (Schober et al., 2018).

Given that both the intrinsic motivation and academic stress scores appear to be approximately normally distributed and measured at the interval level, Pearson's correlation is the most statistically appropriate test.

5. Findings

A Pearson product-moment correlation test was conducted to examine the relationship between academic stress scores and intrinsic motivation scores among adults engaged in e-learning environments (See Table 3).

Table 3

Pearson Correlation Between Academic Stress and Intrinsic Motivation (N = 32)

Variables	R	p	95%CI
Academic stress & Intrinsic motivation	.09	.641	[-.27, .42]

Note. r = Pearson correlation coefficient; p = two-tailed significance; CI = confidence interval.

6. Result

A Pearson product-moment correlation was conducted to examine the relationship between academic stress and intrinsic motivation among adults engaged in e-learning environments. There was a very weak, non-significant positive correlation between academic stress and intrinsic motivation, r (30) = .09, p = .641, 95% CI [-.27, .42]. This suggests that intrinsic motivation is not significantly associated with academic stress in this sample.

IX. Discussion

1. Hypothesis

In my research, it is hypothesized that there would be a significant association between academic stress and intrinsic motivation among adults participating in e-learning environments (Sudarnoto et al., 2025). The findings of my study revealed a very weak, non-significant positive correlation between academic stress and intrinsic motivation among adult learners in e-learning settings. This suggests that academic stress did not have a meaningful impact on learners' intrinsic motivation in the present sample.

Therefore, the results support the null hypothesis, which stated that academic stress does not significantly affect intrinsic motivation in adult e-learners. These results contradict the alternate hypothesis and previous research that has often linked high stress levels to reduced intrinsic motivation in academic settings (Deci & Ryan, 1985; Ryan & Deci, 2000).

2. Previous literature

The hypothesis guiding my study suggested that academic stress would have a significant relationship with intrinsic motivation in adults engaged in e-learning environments. However, the findings showed a very weak, non-significant positive correlation between academic stress and intrinsic motivation, which supports the null hypothesis. In simple terms, stress levels didn't strongly influence how motivated adult learners felt in their online learning environments.

These findings go against what we originally predicted, but they also open the door to other possible explanations. When we look at past research, we find both studies that agree with these results and others that show something different.

Few studies support the idea that adult learners may be able to stay motivated even when they feel stressed. For example, Cho and Heron (2015) found that adult students often use self-directed learning strategies to stay on track. They know how to manage their time, set goals, and stay focused, even under pressure. This helps them stay motivated despite stress.

Artino (2009) also suggested that a little stress can sometimes help, especially when learners see it as a challenge. In his study, adult learners pushed through academic challenges because they had strong personal goals and a clear sense of purpose.

Likewise, Broadbent and Poon (2015) found that adult learners in online programs often do better when they are organized and aware of how they learn. These learners are less likely to be discouraged by stress because they have tools and habits that help them cope.

All these studies suggest that stress does not always reduce motivation. For some adults, motivation may come from within, driven by personal goals and life experience rather than by how easy or stressful a course is. On the other hand, many studies suggest that academic stress can harm motivation, especially if the stress becomes too much. Ryan and Deci (2000), who developed Self-Determination Theory, said that feeling overwhelmed or lacking control can

make people lose interest in learning. If learners feel they are being pushed too hard or are not supported, their motivation can drop.

El-Sayed et al. (2021) studied students during the COVID-19 pandemic and found that academic stress often led to burnout and loss of interest in learning. Students who were anxious or emotionally drained had a harder time staying motivated, which led to lower performance.

Similarly, Sudarnoto et al. (2025) found that adult learners facing high academic stress tended to lose motivation. In their study, stress took away the joy of learning and made it harder for students to stay engaged, especially when they had limited support or resources.

These studies show that in many situations, stress can lower motivation. The difference in findings might come from the type of stress, the environment, or how well learners are able to handle challenges.

3. Strengths and Limitations

One of the strengths of this study lies in its inclusion of participants with diverse employment statuses and levels of professional experience, which helps reflect the realities of adult learners in online education. Additionally, the use of validated tools to measure both intrinsic motivation and academic stress contributes to the credibility of the findings (Field, 2013). However, the study also had limitations. The sample size was relatively small (n = 32), and the gender distribution was heavily skewed toward females (81.25%), which limits the ability to generalize findings to a broader population. The weak and non-significant correlation may also suggest that other variables, such as time management skills, personal resilience, or support systems, might play a more critical role in influencing intrinsic motivation than stress alone (Ryan & Deci, 2000).

X. Study standards

1. Informed Consent (APA Ethics Code Standard 8.02): This study included a clear and comprehensive informed consent section at the beginning of the survey. Participants were told:

- The purpose of the study.
- Estimated time to complete the survey.
- That participation was voluntary.
- That they could withdraw at any point without penalty.
- That their responses would be anonymous and confidential.

  This complies with the APA's standard that researchers must obtain informed consent using language understandable to the population involved (APA, 2020).

2. Voluntary Participation and Right to Withdraw (Standard 8.02b): Participants were explicitly informed that they could decline to participate or exit the survey at any time. There was no coercion, and participants could skip any questions they did not wish to answer. This aligns with APA's requirement to respect the autonomy of research participants (APA, 2020).

3. Anonymity and Confidentiality (Standard 4.01): The study design ensures complete anonymity by not collecting identifiable data. The survey platform (Qualtrics) supports secure data collection. APA's ethical guidelines emphasize the importance of protecting confidential information and anonymizing participant data wherever possible (APA, 2020).

4. Use of Valid and Reliable Instruments (Reporting Standards 6.01–6.06): Two psychometrically validated instruments were used:

- Academic Stress Scale (Rajendran & Kaliappan, 1990)
- Intrinsic Motivation Inventory (IMI) (Ryan & Deci, 2000)

These tools have demonstrated high internal consistency, face validity, and construct validity in prior studies. Their adaptation to the e-learning context and explanation of validity and reliability in your methodology aligns with APA's reporting standards for quantitative research (APA, 2020).

5. Ethical Use of Survey Tools in Online Research (Guideline 9.03): The online administration of the survey via Qualtrics was appropriate for the adult e-learning population and followed best practices in online psychological research. Wright (2005) supports such methods for reaching internet-based populations, which is consistent with APA recommendations for minimizing participant burden while maintaining data integrity.

6. Demographic Transparency (Reporting Standard 6.20): This study reported comprehensive demographic data, including age, gender, employment status, and e-learning experience. APA encourages researchers to provide this context to interpret findings appropriately and promote inclusivity (APA, 2020).

7. Use of Appropriate Statistical Methods (Standard 6.28): By choosing Pearson's product-moment correlation to assess the relationship between two continuous variables, academic stress and intrinsic motivation was methodologically sound and consistent with APA standards, and it is also justified why other statistical tests (ANOVA, regression) were not appropriate, demonstrating an understanding of data integrity and test suitability.

8. Research Purpose and Relevance (Principal B: Fidelity and Responsibility): This study addresses a timely and socially meaningful research question: the impact of academic stress on motivation among adult e-learners. This contributes to evidence-based practices in education and supports APA's call for responsible, socially beneficial research (APA, 2020).

9. Transparency and Clarity in Survey Design (Standard 8.05): The structure of the survey clearly defined sections for consent, demographics, academic stress, and motivation ensures transparency. Instructions were straightforward, promoting participant comprehension, as APA advises when designing survey instruments (APA, 2020).

Overall, the study exemplifies careful adherence to APA's ethical and methodological guidelines. From securing informed consent to ensuring confidentiality and using validated tools, each step reflects ethical integrity and research excellence in line with APA's standards.

Future research

Given the lack of a significant relationship in this study, future research should explore additional psychological and contextual factors that could influence intrinsic motivation in adult e-learners. Investigating constructs like emotional regulation, self-efficacy, and peer interaction could provide a deeper understanding of the motivational dynamics in online learning. Moreover, using a larger and more demographically balanced sample may offer more accurate insights into how stress and motivation interact in diverse adult populations (Field, 2013).

XI. Conclusion

This research set out to investigate whether there is a significant relationship between academic stress and intrinsic motivation in adult learners engaged in e-learning environments. Based on earlier studies and psychological theories like Self-Determination Theory, it was hypothesized that as stress increases, learners would lose interest and enjoyment in their studies, which would lead to lower motivation. However, the results of the study revealed a very weak and statistically non-significant positive correlation between academic stress and intrinsic motivation. In other words, academic stress did not have a meaningful impact on how motivated participants felt in this sample.

This outcome supported the null hypothesis, suggesting that, for these adult learners, stress was not a strong factor in determining their level of motivation. This finding contrasts with many previous studies that show academic stress tends to reduce intrinsic motivation (Ryan & Deci, 2000; Sudarnoto et al., 2025; El-Sayed et al., 2021). At the same time, the results are supported by a growing body of research that highlights the ability of adult learners to maintain motivation despite stress by using self-regulated learning strategies, goal-setting, and effective time management (Artino, 2009; Cho & Heron, 2015; Broadbent & Poon, 2015).

One of the study's strengths lies in its use of well-established and validated tools, the Academic Stress Scale and the Intrinsic Motivation Inventory which ensured the data collected was reliable and aligned with the constructs being measured. The sample also reflected a realistic cross-section of adult learners with varying employment backgrounds and e-learning experience. This diversity adds value by making the findings more reflective of actual adult learning populations.

However, there were also some important limitations. The sample size (N = 32) was relatively small, and the gender distribution was heavily skewed toward female participants (81.25%). These factors may limit how well the findings apply to broader or more gender-balanced populations. Additionally, the correlation between stress and motivation was weak, which suggests that other factors may play a more central role in influencing adult learners' intrinsic motivation. Variables such as emotional regulation, social support, time management skills, or even the quality of course content may all contribute more significantly than stress alone.

In terms of statistical methods, Pearson's product-moment correlation was chosen because it is the most suitable test for examining relationships between two continuous variables. Other methods like regression or t-tests were considered but not used, as they would have required assumptions or categorizations that didn't match the study's design. Pearson's test allowed for a straightforward analysis while preserving the integrity of the original data.

Importantly, this study was designed and conducted in accordance with APA's ethical standards. It included a clearly written informed consent section, assured participants of anonymity and confidentiality, used reliable tools, and avoided coercion. The survey was carefully structured and conducted through a secure online platform, ensuring transparency and protecting participant rights.

Looking ahead, future research should aim to include a larger, more demographically balanced sample to provide more robust findings. It would also be valuable to investigate other psychological or environmental factors that could influence intrinsic motivation in online learners. For example, measuring the role of resilience, perceived support from instructors, or even learning styles could offer deeper insights into what helps adult learners stay motivated under pressure.

In conclusion, while academic stress may be a common experience among adult learners, this study suggests that it does not automatically reduce motivation. Many learners appear to have internal and external strategies that help them cope with stress while staying committed to their learning goals. Understanding these coping mechanisms and motivational factors could help educators design more supportive and effective online learning environments in the future.

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