



## The Relationship between the Levels of Perspiration (Sweating) on Confidence Level and Productivity of Students Who Live in Bangkok

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**ABSTRACT:** Sweating is a physiological mechanism whose function is to cool the body down, but nowadays, it may seem problematic in socializing and working settings, mainly due to stains, odor, and other discomforting sensations that can affect confidence and productivity. This study aims to determine how sweating can impact confidence and productivity levels for students in Bangkok. Based on a comprehensive literature review by 2 experts, an online survey was distributed to students (school, college, university) across Bangkok; the respondents were asked to answer 3 sets of questions about their perspectives on sweat. 345 students (173 male, 162 female, and 10 others) comprised the sample group for this study to observe the correlation between the 2 variables by implementing statistics software. As a result, we discovered a highly significant correlation between sweat levels and productivity with a p-value of 0.010. Our data also show a correlation between gender and confidence; between confidence and age, and between productivity and confidence. However, there was no significant correlation between sweat and confidence.

**KEYWORDS:** Age, confidence levels, gender, productivity levels, students, sweat, Bangkok.

### INTRODUCTION

Sweating is an essential bodily function that helps regulate body temperature by absorbing heat from the skin through evaporation, especially when the body temperature increases as a result of intensive activities or stressful situations to prevent the body from overheating and ensuring normal bodily functions (Katie, 2022). But sometimes when sweating becomes excessive, it can affect self-esteem or self-confidence, particularly in social or professional situations.

Many people may feel that excessive sweating not only makes them feel sticky or uncomfortable, but also leads to a lack of confidence, embarrassment, or nervousness when in public or professional situations, such as meetings, presentations, or public speaking, potentially impacting the person's images.

For some people, Excessive sweating is not only just about appearance, but also causes significant mental distress such as causing anxiety about meeting people. From the study of psychology (Peter Warr, 1978), it has been found that people who sweat excessively in public situations that require for example speaking in public or getting new experience, are more likely to experience high levels of anxiety and stress compared to the general population, which can directly affect their ability to communicate with others.

In student life, confidence is precious. It affects making friends and seeking help in school. Excessive sweating can get rid of confidence, leading to discomfort during learning and presentations. Anxiety makes it hard to ask questions, impacting overall understanding. Thus, confidence is essential for academic success.

In the present day, there are many solutions available for managing excessive sweating, from using antiperspirant products and medications that may control sweat production to medical treatments such as Botox injections that temporarily reduce the function of the sweat glands or even surgery to solve severe sweating problems. At the same time, the effects of sweat on social interactions have been studied (Krishan Parashar, Taylor Adlam, Geoffrey Potts, et al. 2022), such as the odor of sweat or sweat stains that can make them feel uncomfortable and affect the development of social relationships. When a person expresses anxiety from sweating, they may be perceived negatively by others.

So, the objective of this study is to examine the relationship between perspiration in the general body on confidence level and productivity of students who live in Bangkok. We will analyse factors that may affect individuals' self-confidence levels when sweating, such as self-perception and individual preparation efforts due to stress from challenging situations or physically intense



activities. The goal of this study is to understand how excessive sweating impacts self-confidence and productivity in daily life, particularly in social situations, especially in areas like the palms, armpits and face can cause embarrassment and reduce self-confidence. This fear can heighten anxiety, making it difficult to engage in social interactions and leading to decreased productivity. The study aims to highlight the significant effects of sweating on an individual's well-being (Krishan Parashar et al., 2023).

## INSTRUMENT

### Part 1: General information

1. Gender.
2. Age.
3. Most sweaty body part.
4. The average frequency of sweating per day.
5. The average duration of a typical sweating episode.
6. Factors that induce sweat the most.
7. Typical sweat level.
8. Do you think that sweating is a problem or a normal function of the body?

### Part 2: Productivity with Sweat

1. When I sweat, my work performance will decrease.
2. I dislike working when I am sweating.
3. When I sweat, I produce lower-quality work.
4. When I sweat, it is harder for me to multitask.
5. When I sweat, it is harder for me to concentrate on a task.
6. When I sweat, I feel more sleepy.
7. I don't feel like doing anything until I get to clean off my sweat.
8. I keep thinking about how sweaty I am when I am working.
9. I try to exercise after work so I don't sweat while doing work.
10. When I sweat, it is harder for me to engage in group work.
11. I feel tired when I have to deal with sweat while I am working.
12. I try to wear breathable clothing while doing work to avoid sweating.

### Part 3: Confidence with Sweat

1. I feel less confident when I'm nervous.
2. I have canceled plans because I felt uncomfortable sweating.
3. I feel like I have to try to get rid of my sweat in public.
4. I feel less social when I'm sweating.
5. I try to avoid going out when it is hot outside.
6. I feel like I am being judged when I sweat.
7. I often worry whether there will be air-conditioning when doing something important.
8. I am prepared with ways to keep myself dry wherever I go.
9. I feel an immediate urge to return home when I begin to sweat.
10. I feel embarrassed when I see sweat stains on my clothes.
11. I plan my day based on the weather forecast.

## METHODOLOGY

This survey research was conducted to investigate the body area of perspiration (sweating) on the confidence level and productivity of students who live in Bangkok. The questionnaires consist of 3 parts: 1) General information, 2) Productivity with sweating, and 3) Confidence with sweating. The responses for the first part (general information) were collected using multiple



choice questions while the second and third parts (productivity and confidence with sweating) were collected mainly using a 5-point Likert scale, with answers which range from 5 strongly agree to 1 strongly disagree. Before our questionnaire was used for data collection, each question was reviewed to acquire the Item-Objective Congruence index (IOC) equal to 0.565. We conducted a pilot test of 30 participants to calculate Cronbach’s alpha. Cronbach’s alpha was used for testing the reliability of the questionnaire, and we obtained a value of 0.905 which is higher than 0.70 making our value lie in the range of acceptable values (Tavakol & Dennick, 2011). Our survey was distributed in October 2024 to secondary school and university students in Bangkok, Thailand via applications such as LINE, Instagram, and Facebook, receiving 345 responses. We used the Statistical Package for the Social Sciences (SPSS) program version 30.0.0.0 (172) to analyze the data. We used a one-way ANOVA (F-test) to find the differences between three or more variables and Pearson’s correlation (r-value) to find the correlation between variables.

**RESULTS**

**Table 1: General information (N = 345)**

	Frequency	Valid Percentage
<b>Gender</b>		
Male	173	50.1
Female	162	47
Others	10	2.9
<b>Age</b>		
11-14 years	44	12.8
14-19 years	160	46.4
More than 19 years	141	40.9
<b>Most sweaty body part</b>		
Head	135	39.1
Upper body	187	54.2
Lower body	23	6.7
<b>Average frequency of sweating per day</b>		
0 times	15	4.3
Once	71	20.9
2-3 times	163	47.2
4-5 times	44	12.8



More than 5	52	15.1
<b>The average duration of a typical sweating episode</b>		
Less than 1 min	18	5.2
1-2 min	73	21.2
3-4 min	125	36.2
More than 5	129	37.4
<b>Factors that induce sweat the most</b>		
Physical Activity	159	46.1
Eating Spicy Food	15	4.3
Spending time outdoor	114	33
Wearing heavy clothing	17	4.9
Being in crowded areas	40	11.6
<b>Typical sweat level</b>		
Level 1: Light	82	23.8
Level 2: Moderate	184	53.3
Level 3: Heavy	79	22.9
<b>Is sweating a problem or is it a normal function of your body?</b>		
Accept as a bodily function	290	84.1
Believe that it is a problem	55	15.9

173 (50.1%) of the sample were males, 162 (47%) were females and 10 (2.9%) identified as others. Over 80% of the respondents are aged 14 or older. The part of the body that people are most aware of when sweating is the upper body such as the chest, armpit, and forearm with 187 (54.2%), most people are not very aware when their lower body sweats. Most people reported that they sweat once or 2-3 times a day with 234 (68.1%) and the duration of a typical episode lasting more than 5 minutes with 129 (37.4%). The percentage of people increases as the duration of sweat episodes increases. Exercise is the leading factor in producing sweat in 159 people (46.1%) Most people think their sweat level is level 3: moderate with 184 (53.3%). A majority of 290 people (84.1%) accept sweating as a bodily function.



**Table 2: Descriptive Statistics (Mean and Standard Deviation) for productivity and confidence with sweat**

	N	Mean	Std. Deviation
Productivity with sweat	345	3.189	0.783
Confidence with sweat	345	3.152	0.835

The mean scores are 3.189 for productivity and 3.152 for confidence, with standard deviations of 0.783 and 0.835, respectively. This indicates that when sweating, people may feel less confident and less productive.

**Table 3: One-way ANOVA (F-test); Gender and Confidence with sweat**

	SS	df	MS	F	p
Between Groups	6.584	2	3.292	4.822**	0.009
Within Groups	233.496	342	0.683		
Total	240.08	344			

\*\* Correlation is significant at the 0.01 level (2-tailed)

The one-way ANOVA shows a significant difference in confidence with sweat between genders as the p-value is less than 0.01.

**Table 4: One-way ANOVA (F-test); Age and Confidence with sweat**

	SS	df	MS	F	p
Between Groups	12.836	2	6.418	9.659**	<0.001
Within Groups	227.243	342	0.664		
Total	240.08	344			

\*\* Correlation is significant at the 0.01 level (2-tailed)

One-way ANOVA results indicate a significant difference in confidence with sweat between different age groups as the p-value is less than 0.01.

**Table 5: One-way ANOVA (F-test); Sweat level and Productivity with sweat**

	SS	df	MS	F	p
Between Groups	5.556	2	2.778	4.625*	0.010
Within Groups	205.412	342	0.601		
Total	210.969	344			

\* Correlation is significant at the 0.05 level (2-tailed)



The one-way ANOVA indicates a significant difference in productivity with sweat between sweat levels as the p-value is less than 0.05.

**Table 6: Pearson’s Correlation between Productivity with sweat and Confidence with sweat**

		Productivity	Confidence
<b>Productivity with sweat</b>	Pearson Correlation		0.649**
	Sig. 2-tailed		<0.001
	N	345	345
<b>Confidence with sweat</b>	Pearson Correlation	0.649**	
	Sig. 2-tailed	<0.001	
	N	345	345

\*\* . Correlation is significant at the 0.01 level (2-tailed)

Table 6 demonstrates that there is a strong positive correlation ( $r = 0.649$ ) between productivity and confidence when sweating.

**DISCUSSION**

The findings of this study indicate a significant negative effect ( $p = 0.010$ ), as shown in Table 5 of sweat levels on productivity among students in Bangkok. This suggests that increased sweating is linked to a noticeable decline in work performance. The one-way ANOVA test revealed that there is a statistically significant difference in productivity levels depending on the degree of sweating. This supports the idea that sweat has a meaningful impact on how effectively students are able to complete tasks, concentrate, and engage in group work.

Although sweating affected productivity, there was no statistically significant relationship between sweat and confidence levels. This may be due to individual differences in self-perception and coping mechanisms when dealing with visible sweat or discomfort. Some individuals may have already adapted strategies to cope with sweating, such as wearing breathable clothes or carrying extra clothing. This was suggested by several open-ended responses in our questionnaire, where participants mentioned these specific actions, which may help reduce the negative impact of sweating on their confidence.

According to the one-way ANOVA results, both gender ( $p = 0.009$ ) and age ( $p < 0.001$ ) showed a significant difference in confidence levels. This suggests that students of different genders and age groups may experience varying levels of self-esteem and emotional responses when sweating in social or academic settings. Younger students may be more self-conscious about sweating in public due to ongoing self-concept development, while older students may have developed better emotional regulation and coping strategies (Orth & Robins, 2014).

Furthermore, the correlation analysis showed a strong positive correlation ( $r = 0.649, p < 0.001$ ) between confidence and productivity when sweating. This means that students who feel more confident, even when sweating, tend to report higher productivity levels in association with greater confidence. On the other hand, it is possible that those who lack confidence become more distracted or uncomfortable, which may lower their efficiency in completing tasks.

Overall, the study confirms that sweating has a measurable impact on students' daily experiences, especially concerning their performance and psychological comfort in educational settings. Understanding these effects can help develop better learning



environments and raise awareness about the psychological aspects of physical discomfort like sweating. Where appropriate, schools and universities might consider supporting better hygiene practices and classroom environments that could benefit students' well-being and productivity. Students could also apply the findings by adopting small habits—like wearing breathable clothes or carrying a towel—to improve their own comfort and focus.

## CONCLUSION

Our results show that there is a significant correlation between sweat levels and confidence as well as productivity while sweating in students in Bangkok. It suggests that the more we sweat, the lower our confidence and productivity. Additionally, we also found that confidence and productivity has a positive correlation. Our findings can be used to assist in the creation of a more productive workspace which may enrich students' minds. Furthermore, it can be used to generate an environment where mental health in students is prioritised alongside education to improve and reinforce their self-esteem to increase productivity.

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