The Impact of Content Moderator Accounts on BPO Workers: Exploring How Social Media Content Exposure Contributes to Stress and Mental Health Challenges

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Abstract

The Philippines has emerged as a global hub for content moderation outsourcing, with thousands of Business Process Outsourcing (BPO) employees engaged in reviewing user-generated content on social media platforms. While this sector contributes significantly to the economy, it exposes workers to disturbing material, raising concerns about their psychological well-being. This study investigates the impact of graphic and distressing content on the stress levels and mental health of BPO content moderators. Anchored in the Socio-Cognitive Occupational Stress and Well-being (SCOSW) model—an integration of the Job Demand-Control-Support (JDCS) model and Social Cognitive Theory (SCT)—This paper examines how job demands, control, social support, self-efficacy, self-regulation, and outcome expectations influence perceived stress and mental health outcomes. Using a quantitative methodology and Structural Equation Modeling (SEM), the study evaluates causal relationships among latent variables such as emotional demands, trauma exposure, and psychological distress. Results are expected to validate that higher job demands and lower autonomy elevate stress and worsen mental health, while strong support systems and cognitive coping mechanisms mitigate these effects. The findings aim to inform the development of workplace policies and mental health strategies tailored to the content moderation context, emphasizing the need for systemic interventions to safeguard employee well-being.

Keywords
Content moderation, Business Process Outsourcing, Mental health,Job stress, and SCOSW model.

1. Introduction
Digital technologies have revolutionized communication and access to information, with social media platforms now playing a central role in engagement and information sharing (National Assessment Governing Board, 2024). As more people join online platforms, there's been a noticeable rise in problematic content—things like hate speech, explicit material, and violent imagery. According to Gorwa et al. (2020**)** This creates serious challenges for social media companies trying to keep their spaces safe and respectful. To tackle this, many firms have turned to outsourcing their content moderation work, often partnering with BPO companies in the Philippines. While this has opened up job opportunities for many Filipinos, it also raises important concerns about the working conditions and mental health of

the moderators, who are regularly exposed to upsetting and disturbing content (Washington Post, 2020; Steiger et al., 2021).

It's really important to understand the challenges faced by content moderators, including the demands of the job, the level of control they have, the support they receive from colleagues and supervisors, and how they cope with stress. To explore these aspects, The proponents used two models like the Job Demand-Control-Support (JDCS) framework (Johnson & Hall, 1988) and Social Cognitive Theory (Bandura, 1986). These ideas have been combined into a modified version called the Socio-Cognitive Occupational Stress and Well-being (SCOSW) Model. This model suggests that emotional strain, mental workload, and cognitive demands can increase stress levels and negatively impact mental health. On the other hand, having more control over their tasks and schedules, along with strong social support from peers and supervisors, can help reduce stress and promote better psychological well-being.

1.1 Objectives
To examine the effect of content moderator jobs in BPO (Business Process Outsourcing) environments on the well-being of workers, particularly how exposure to toxic social media content leads to stress and mental health issues. This will be conceptualized in terms of the Job Demand-Control-Support (JDCS) Model and Social Cognitive Theory (SCT), with emphasis on self-efficacy, self-regulation, and outcome expectations as mediating cognitive variables.

2. Literature Review
Recent studies consistently indicate that content moderators often face significant mental health challenges, primarily due to their constant exposure to disturbing online material (Teo, 2024; Rachuk, 2024). This ongoing exposure can, unfortunately, lead to vicarious trauma and other psychological issues, which are further worsened by heavy workloads (Raja, 2023). Moreover, according to Towler (2020), Job Demands-Control-Support (JDCS) model, factors like job control and social support can serve as important buffers against this stress. For instance, research such as Spence et al.'s (2023) highlights the severe psychological impact that content moderation can have, comparable to what frontline professionals experience, thus underscoring the urgent need for trauma-informed care. In addition, the Social Cognitive Theory as outlined in the (Rural Health Promotion and Disease Prevention Toolkit, n.d.) provides a useful framework for understanding how support systems can be structured to better assist these workers. Overall, these findings emphasize the importance of implementing comprehensive strategies to support content moderators' mental health. Cross-sectional research confirms the link between exposure and distress, noting the protective role of a supportive work environment. Further studies have explored wellness interventions, identified research gaps (The Psychological Well-Being of Content Moderators), and even investigated the unexpected lack of benefit from positive stimuli (Awe Versus Aww). Overall, the evidence underscores the urgent need for more research and tailored support systems to address the mental health crisis content moderators face.

3. Methodology
3.1 Theoretical Research Model
Figure 1examines the relationship of Job Demand-Control-Support (JDCS) and Social Cognitive Theory (SCT) by using a modified Socio-Cognitive Occupational Stress and Well-being (SCOSW) Model.The model proposes that job demands (emotional, cognitive, and workload) will directly contribute to increased perceived stress and poorer mental health outcomes. Conversely, job control (autonomy over tasks, schedules, and methods) and social support (from supervisors, colleagues, and the organization) are expected to mitigate perceived stress and improve mental health outcomes.
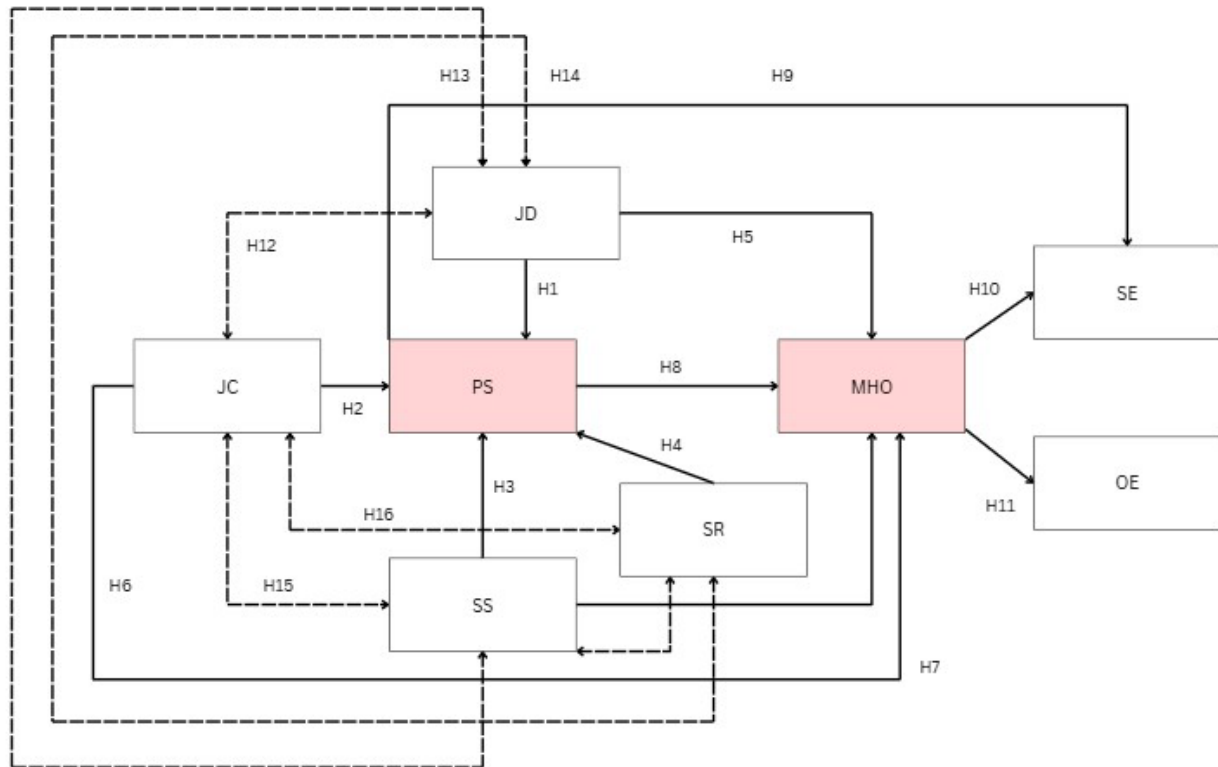
Figure 1. Theoretical Research Model

3.2. Hypothesis

The researchers used the Job Demand-Control-Support (JDCS) model and Social Cognitive Theory (SCT) models to combine and come up with

The Socio-Cognitive Occupational Stress and Well-being (SCOSW) model, that integrates the elements of both models. It provides the foundation for the hypotheses presented in this section. This model posits that both job-related and cognitive factors play a significant role in content moderators' experiences of stress, job demands, and mental health. The following hypotheses are formulated to test the direct relationships between these factors.

3.2.1 Job Demands (JD):

Job demands refer to the physical, mental, and emotional criteria that content moderators must meet as part of their job due to their continual exposure to potentially distressing visuals. Content moderators experience stress-related consequences (Benjelloum, 2020). In view of this, the study suggested the following hypotheses;

Hypothesis (H1): Higher levels of job demands (emotional, cognitive, and workload) will be associated with higher levels of perceived stress among content moderators.
Hypothesis (H2): Higher levels of job demands (emotional, cognitive, and workload) will be associated with poorer mental health outcomes (higher levels of anxiety, depression, and burnout) among content moderators

3.2.2 Job Control (JC):

Job control pertains to the administration and oversight of processes or tasks operating within an operating system, particularly in multitasking settings. As noted by Scanlan (2019), effective job control has led to decreased disengagement and turnover intentions, thereby enhancing overall job satisfaction, feedback, and employee participation.

Hypothesis (H3): Higher levels of job control will be associated with lower levels of perceived stress among content moderators.

Hypothesis (H4): Higher levels of job control will be associated with better mental health outcomes (lower levels of anxiety, depression, and burnout) among content moderators.

3.2.3 Social Support (SS):

Social support refers to the aid and encouragement provided by an individual's network of family, friends, and colleagues. According to Gaino, L. V. (2019), It is linked to positive health outcomes and it helps individuals cope with stress by buffering its negative effects. The perception of social support depends on the availability of support and factors like socioeconomic status, health, and culture. Based on this, the study proposed the following hypotheses:

Hypothesis (H5): Higher levels of social support will be associated with lower levels of perceived stress among content moderators.
Hypothesis (H6): Higher levels of social support will be associated with better mental health outcomes (lower levels of anxiety, depression, and burnout) among content moderators.

3.2.4 Self-Efficacy (SE):

Self-efficacy is the belief that a person has in their capability to effectively carry out tasks and accomplish objectives. According to Cabrera-Aguilar, E., (2023), Self-efficacy plays a critical role in the connection between resilience (work resources), stress (job demands), and work engagement. Enhancing self-efficacy and resilience can lead to greater work engagement and personal fulfillment. With that being said, the following hypotheses has been formulated;

Hypothesis (H7): Higher levels of self-efficacy will be associated with lower levels of perceived stress among content moderators.
Hypothesis (H8): Higher levels of self-efficacy will be associated with better mental health outcomes (lower levels of anxiety, depression, and burnout) among content moderators.

3.2.5 Self-Regulation (SR):

Self-regulation is the capacity to control one's emotions, thoughts, and actions in a manner that supports long-term objectives. People vary in their ability to regulate emotions. However, skills related to self-regulation can be taught, and research has demonstrated that training in self-regulation within healthcare can enhance one's capacity to handle stress and negative emotions (Aghamohammadi, F., Saed, et.al, 2022). In this view, the study suggested the following hypotheses;

Hypothesis (H9): Higher levels of self-regulation will be associated with lower levels of perceived stress among content moderators

Hypothesis (H10): Higher levels of self-regulation will be associated with better mental health outcomes (lower levels of anxiety, depression, and burnout) among content moderators.

3.2.6 Outcome Expectations (OE)

Outcome expectations denote the expected results or effects that a person or group foresees from a specific action, choice, or behavior. In a recent study, Doménech-Betoret (2017) indicates that self-efficacy (the belief in one's capacity to achieve) leads to outcome expectation; hence, beliefs about competence, like self-efficacy, affect their expectations and the importance they assign to tasks. The results back the concept that confidence influences expectations and the value of tasks.

Hypothesis (H11): More positive outcome expectations will be associated with higher levels of self-efficacy among content moderators
Hypothesis (H12): More positive outcome expectations will be associated with higher levels of self-regulation among content moderators.

3.2.7 Perceived Stress (PS):

Perceived stress is defined as the individual's evaluation and experience of stress in their lives. It encompasses the subjective sensation of being overwhelmed or struggling to manage the demands imposed upon them. There are notable negative correlations associated with perceived stress. Research has consistently shown that stressful events often precede depressive episodes, establishing a connection between stress and depressive symptoms, with cognitive

models highlighting how interpretations of stressors can lead to negative self-beliefs and biased information processing, ultimately increasing the likelihood of depression. (Huh et al., 2021).

Hypothesis (H13): Higher levels of perceived stress will be associated with poorer mental health outcomes (higher levels of anxiety, depression, and burnout) among content moderators.

3.2.8. Mental Health Outcomes (MHO):

Mental health outcomes refer to the psychological and emotional states that indicate an individual's overall well-being. These include symptoms such as anxiety, depression, burnout, and psychological distress. Mental health can be influenced by a variety of factors, including perceived stress, emotional demands, social support, and personal coping strategies. Poor mental health outcomes often result from prolonged exposure to stressors, lack of supportive resources, and emotional fatigue, ultimately affecting daily functioning and occupational performance (World Health Organization, 2021).

Hypothesis (H15): Higher levels of perceived stress will be associated with poorer mental health outcomes (higher levels of anxiety, depression, and burnout) among content moderators.
Hypothesis (H16): Lower levels of social support will be associated with poorer mental health outcomes (higher levels of anxiety, depression, and psychological distress) among content moderators.

4. Results and Discussion

Table 1 illustrates the summary of demographic profiles of the respondents, including gender, age, educational attainment, residential area, and monthly income.

Table 1. Summary of Demographics

Characteristics	Value	Frequency	Percentage
	Male	203	35.9
	Female	240	42.5
Gender	Prefer not to say	122	21.6
	16-18 years old	0	0
	19-21 years old	62	11
	22-25 years old	166	29.4
	26-29 years old	107	18.9
	30-32 years old	203	35.9
Age	33-35 years old	19	3.4
	36 above years old	7	1.2
	Elementary Graduate	0	0
	Highschool Graduate	123	21.8
	Bachelor's Degree	188	33.3
Educational Attainment	Master's Degree	12	2.1
	Doctorate Degree	3	0.5

	Prefer not to say	237	41.9
Residential Area	Caloocan	40	7.1
	Las Pinas	4	0.7
	Manila	46	8.1
	Mandaluyong	8	1.4
	Marikina	45	8
	Malabon	46	8.1
	Makati	66	11.7
	Muntinlupa	60	10.6
	Navotas	54	9.6
	Pasig	122	21.6
	Paranaque	10	1.8
	Pateros	6	1.1
	Pasay	4	0.7
	San Juan	7	1.2
	Taguig	9	1.6
	Valenzuela	9	1.6
	Quezon City	29	5.1
Monthly Income	Below PHP 10,000	0	0
	PHP 10,001 - PHP 15,000	67	11.9
	PHP 15,001 - PHP 25,000	85	15
	PHP 25,501 - PHP 40,000	198	35
	Above PHP 40,000	93	16.5
	Prefer not to say	122	21.6

4.1 Cronbach's Alpha

Table 2 summarizes the reliability of the latent variables based on Cronbach's Alpha. Job Control (0.87), Outcome Expectations (0.86), and Job Demands (0.83) showed good reliability, indicating consistent internal responses across their respective items. Self-Regulation (0.77), Mental Health Outcome (0.80), and Perceived Stress (0.84) were rated as acceptable. In contrast, Social Support (0.67) and Self-Efficacy (0.65) were found to be questionable, suggesting the need for further refinement or additional items to improve measurement consistency. Most subscales demonstrated good to acceptable reliability, with Cronbach's alpha values ranging from 0.77 to 0.87. This suggests that the items within each scale are generally well-correlated and consistently measure the intended constructs. However, two subscales—Self-Efficacy ($\alpha = 0.65$) and Social Support ($\alpha = 0.67$)—showed questionable internal consistency, indicating that some items within these scales may not align strongly with the overall construct and may benefit from refinement or further validation (Table 3).

Table 2. Reliability Analysis of Constructs

Latent Variables	Cronbach's Alpha	Remarks
Job Demands	0.83	Good
Job Control	0.87	Good
Social Support	0.67	Questionable
Self-Efficacy	0.66	Questionable
Self-Regulation	0.77	Good
Outcome Expectations	0.86	Good
Perceived Stress	0.84	Acceptable
Mental Health Outcome	0.80	Good

Table 3. Interpretation of Cronbach's alpha values

Interpretation of Cronbach's alpha values	
≥ 0.9	Excellent
0.8–0.9	Good
0.7–0.8	Acceptable
0.6–0.7	Questionable
0.5–0.6	Poor
< 0.5	Unacceptable

4.2 Reliability Testing

This study employed confirmatory factor analysis (CFA) to assess the reliability and validity of scales measuring key constructs like job demands, control, support, self-efficacy, self-regulation, outcome expectations, perceived stress, and mental health among BPO content moderators. The CFA results generally confirmed the scales' reliability and validity, with most items strongly relating to their intended factors and most scales showing acceptable internal consistency and construct validity. While some areas for scale improvement were noted, the validated scales offer a robust basis for examining the relationships between job factors, coping, stress, and mental health within this occupational group. Overall, the constructs demonstrated moderate average variance extracted (AVE = 0.708) and good composite reliability (CR = 0.29) (Table 4).

Table 4. Tests of Reliability and Validity

Latent Variables	Items	Factor Loadings	Average Variance Extracted (AVE)	Composite Reliability (CR)
Job Demands	JD1	.880	0.7744	0.2256
	JD2	.891	0.793881	0.206119
	JD3	.878	0.770884	0.229116
	JD4	.900	0.81	0.19
Job Control	JC1	.930	0.8649	0.1351
	JC2	.942	0.887364	0.112636
	JC3	.938	0.879844	0.120156
	JC4	.936	0.876096	0.123904
Social Support	SS1	.844	0.712336	0.287664
	SS2	.850	0.7225	0.2775
	SS3	.843	0.710649	0.289351
	SS4	.816	0.665856	0.334144
Self-Efficacy	SE1	.797	0.635209	0.364791
	SE2	.800	0.64	0.36
	SE3	.762	0.580644	0.419356
	SE4	.787	0.619369	0.380631
Self-Regulation	SR1	.847	0.717409	0.282591
	SR2	.863	0.744769	0.255231
	SR3	.837	0.700569	0.299431
	SR4	.854	0.729316	0.270684

4.3 Numerical Results

All observed variables had high and statistically significant loadings ($\geq$ .80, p < .001) onto their corresponding latent constructs, supporting that the measurement model has good convergent validity. The only exception was the Job Demands indicators, where high loadings (>.93) were presented, but p-values were not supplied—implying they might have been fixed for model identification (Table 5).

<p align="center">Table 5. Hypothesis Model - Loadings of Measurements</p>

Latent Variables	Observed Variables	Standard Regression Estimate	P-Value
Job Demands	JD1	0.939	N/A
	JD2	0.944	N/A
	JD3	0.937	N/A
	JD4	0.949	N/A
Job Control	JC1	0.964	<.001
	JC2	0.971	<.001
	JC3	0.969	<.001
	JC4	0.968	<.001
Social Support	SS1	0.919	<.001
	SS2	0.922	<.001
	SS3	0.918	<.001
	SS4	0.903	<.001
Self-Efficacy	SE1	0.893	<.001
	SE2	0.895	<.001
	SE3	0.873	<.001
	SE4	0.887	<.001
Self-Regulation	SR1	0.92	<.001
	SR2	0.929	<.001
	SR3	0.915	<.001
	SR4	0.924	<.001

Outcome Expectations	OE1	0.807	<.001
	OE2	0.832	<.001
	OE3	0.867	<.001
	OE4	0.818	<.001
Perceived Stress	PS1	0.979	<.001
	PS2	0.978	<.001
	PS3	0.978	<.001
	PS4	0.976	<.001
Mental Health Outcome	MHO1	0.87	<.001
	MHO2	0.882	<.001
	MHO3	0.847	<.001
	MHO4	0.875	<.001

4.4 Structural Equation Model

The provided SEM diagram illustrates a hypothesized network of relationships between several latent constructs and their corresponding measured variables. The model posits that Job Demands (JD) influence Job Control (JC) and Perceived Stress (PS). In turn, JC and Social Resources (SR) are proposed to impact Mental Health Outcome (MHO). Furthermore, MHO is shown to influence Self-Efficacy (SE), which is also affected by PS and Social Support (SS). Finally, SE is hypothesized to predict Organizational Engagement (OE). The model also suggests a correlation between SR and PS. This visual representation allows researchers to statistically test the strength and direction of these complex, interconnected relationships (Figure 2).
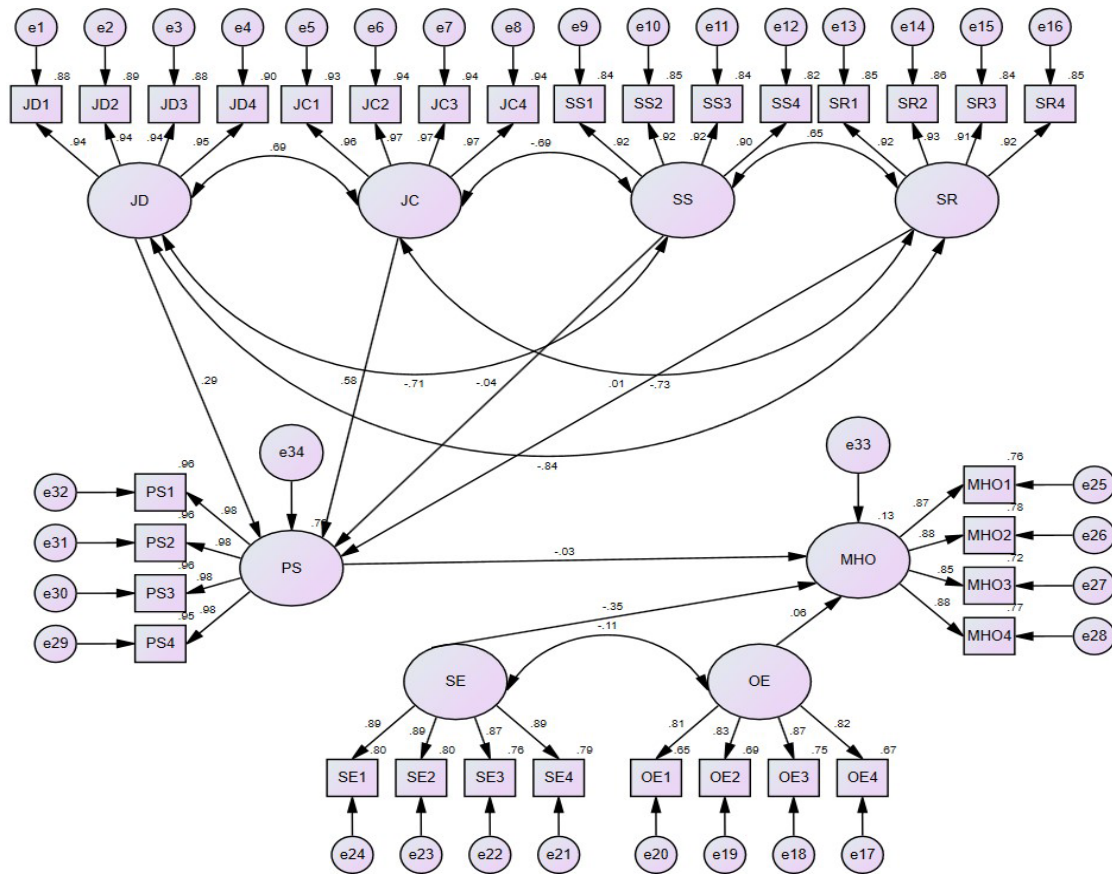
Figure 2. Structural Equation Model

4.5 Model Fit Indices

Table 6 presents the model fit indices used to assess the goodness of fit of the proposed model. The Chi-square/df value is 2.265, which is below the recommended cut-off of 5, indicating an acceptable fit. The Comparative Fit Index (CFI) and Normed Fit Index (NFI) have values of .976 and .958, respectively, both are acceptable. Although the RMSEA value of .869 slightly exceeds the ideal range of 0.05 to 0.08, it is still considered within an acceptable margin. Overall, the indices indicate a satisfactory model fit.

Table 6. Model Fit Indices

Model Fit	Value	Cut-Off	Reference	Remarks
Chi-square/df	2.265	<5	Marsh and Hocevar (1985)	Acceptable
CFI	.976	≥0.9	Nikkhah et al (2018)	Acceptable
NFI	.958	≥0.8	Ibrahim et al. (2021)	Acceptable
RMSEA	.869	0.05 to 0.08	Kim et al. (2016)	Acceptable

5. Conclusion

Content moderators in business process outsourcing (BPO) settings experience significant psychological distress from constantly viewing disturbing social media content. High job demands, lack of control, insufficient support, and poor coping skills exacerbate stress, anxiety, depression, and burnout. According to Spence (2025), a study performed suggests that about a third of content moderators are most likely to experience significant rates of psychological distress, while a quarter are most likely to have a low level of distress.

Research using the Job Demand-Control-Support (JDCS) model and Social Cognitive Theory (SCT) shows that improving workplace conditions—such as increasing autonomy, providing more support, and building coping skills—can significantly reduce these risks. The study recommends comprehensive mental health programs, flexible work arrangements, and training to create a healthier work environment.

Prioritizing moderators' mental health is crucial for employee well-being, efficient operations, and ethical business practices in today's digital world. BPO companies and social media platforms must make mental health a priority in their workplace cultures and management strategies.

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Biographies

Lord Francis R. Aspecto is currently a 4th-year Industrial Engineering student at the Technological Institute of the Philippines. He was born on August 27, 2002, in Marikina City. His academic journey began at Full House Learning Center and continued through high school at St. Michael Archangel School, where he once served as student body president. Known for his discipline and strong sense of commitment, Francis is someone who approaches both academics and life with focus and determination. Outside the classroom, he has a genuine love for the outdoors—camping is one of his favorite ways to recharge. With a passion for hands-on experiences and a natural problem-solving mindset, Francis hopes to make a lasting impact in the industrial sector while also giving back to his community

Mary Grace Bello is an industrial engineering student at the Technological Institute of the Philippines (TIP) in Quezon City. She was a production intern at the printing and packaging solution company. She's proficient in using Microsoft Office applications such as Microsoft Word, Excel, and PowerPoint, she also knows various applications such as Canva, Minitab, and Google applications. She was also a member of Inhenyera. Furthermore, her internship has allowed her to develop hands-on skills in Time and Motion study and Overall Equipment Effectiveness Calculation. With her strong academic background and practical skills, she is eager to utilize her skills and knowledge to create innovative solutions and achieve success.

Christian G. Cabalatungan is a dedicated 4th-year Industrial Engineering student at the Technological Institute of the Philippines. Born on March 13, 2003, he hails from Inabaan Sur, Rosario, La Union. Christian began his academic journey at Inabaan Elementary School and later continued his secondary education at Rosario Integrated School. A proud Eagle Scout awardee from the Boy Scouts of the Philippines, Christian is known for his discipline and commitment. He has a deep passion for the outdoors, often spending his time camping. Christian strives to combine his love for hands-on experiences with the problem-solving mindset of an engineer, aiming to contribute meaningfully to the industrial sector and the community.

Joseph Raniag C. Macarulay, a 4th-year student at the Technological Institute of the Philippines:
Joseph Raniag C. Macarulay is a dedicated and driven 4th-year student currently pursuing his studies at the esteemed Technological Institute of the Philippines (T.I.P.). Embarking on his academic journey at T.I.P.. Furthermore, he was a member of the Technological Institute of the Philippines Chorale Society(a group of students and alumni that participates and competes in the Chorale Competition

Kevin John Reñido is 23 years old and lives in Antipolo City, Rizal, he is a 4th year student, studying Bachelor of Science in Industrial Engineering in Technological Institute of the Philippines, he graduated high school in Holy Spirit Integrated School and took Accountancy and Business Management strand, He was a former Director for Income Generation of the Philippine Institute of Industrial Engineers - National Student Chapter (PIIE-NSC) and the former Vice President for Finance of Philippine Institute of Industrial Engineers - Operational Research Society of the Philippines Adamson University Chapter (PIIE-ORSP AdU Chapter).

Lynz Krisha Reyes is a fourth-year Industrial Engineering student at the Technological Institute of the Philippines – Quezon City. As a working student for the past three years, she has developed exceptional time management, adaptability, and perseverance—traits that have allowed her to balance both academic responsibilities and professional commitments successfully. She also demonstrates strong leadership and organizational skills, she has led multiple major academic projects, including *Project Feasibility, Ergonomics 1 and 2, Risk Management*, and is currently handling the *Design Project 1* thesis. She is known among peers and mentors for being resourceful, solution-oriented, and collaborative—qualities essential in the field of Industrial Engineering.

Maricar M. Navarro. holds the esteemed titles of ASEAN Engineer (AE) and Professional Industrial Engineer (PIE), accredited by the ASEAN Federation of Engineering Organisations (AFEO) and Philippine Institute of Industrial Engineers (PIIE). She currently serves as a Professor in both Undergraduate and Graduate School Program of Technological Institute of the Philippines, bringing over 18 years of combined experience in industry, academia, and research. Her expertise spans optimization of production processes, facility layout design, warehouse operations, and service delivery. Dr. Navarro's current research interests focus on financial optimization and decision-making in operations research. She earned both her master's and Ph.D. in Industrial Engineering from MAPUA University. As an associate member of the National Research Council of the Philippines (NRCP) and member of PIIE, Dr. Navarro

contributes significantly to advancing research initiatives and professional standards in Industrial engineering and related fields. Her dedication and expertise make her a pivotal figure in both academic circles and national research endeavors.