Strata Social and Humanities Studies, 2026, Vol. 4, No. 1, 136–151
E-ISSN: 2987-2537 | P-ISSN: 2987-3193
doi: 10.59631/sshs.v4i2.601
Advance Access publication October 31, 2026

STRATA
SOCIAL AND HUMANITIES STUDIES
journals.stratapersada.com/index.php/sshs

Social Media Sustainability Communication and Fashion Overconsumption among Generation Z: The Mediating Role of Sustainability Awareness

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Article History	Submitted	Revised	Accepted
	2026-08-30	2026-10-04 & 2026-10-19	2026-10-26

Abstract

Fast fashion contributes to environmental pressures through rapid trend turnover and frequent garment replacement, while social media simultaneously promotes sustainability awareness and trend-driven consumption. This study examines the relationships among sustainability communication on social media, sustainability awareness, and fashion overconsumption among Generation Z in Indonesia, focusing on the mediating role of awareness. A cross-sectional survey of 400 respondents aged 17–27 years from DKI Jakarta, West Java, East Java, and the Special Region of Yogyakarta was analysed using partial least squares structural equation modelling (PLS-SEM). The results indicate that sustainability communication is positively associated with sustainability awareness ($\beta = 0.486$, $p < .001$), while awareness is negatively associated with fashion overconsumption ($\beta = -0.398$, $p < .001$). Communication also has a significant negative direct association with overconsumption ($\beta = -0.156$, $p = .007$). The indirect association through awareness is significant ($\beta = -0.193$, $p < .001$), indicating complementary partial mediation. Despite relatively high awareness, respondents reported elevated overconsumption tendencies, highlighting a potential awareness–behaviour gap. The findings suggest that sustainability communication should combine credible environmental information with practical strategies for reducing unnecessary purchases and extending garment use. However, the cross-sectional design, purposive sampling, and self-reported measures limit causal inference and generalisability.

Keywords: Fashion overconsumption, generation z, social media, sustainability awareness, sustainability communication.

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INTRODUCTION

The environmental burden of clothing is connected not only to how garments are made, but also to how many are produced, how often they are purchased, how long they are used, and what happens when they are discarded (Joy et al., 2012; Niinimäki et al., 2020). A major review of the fashion value chain describes impacts associated with resource extraction, energy and water use, chemical pollution, greenhouse-gas emissions, and textile waste, and argues that changes in production must be accompanied by changes in consumption and garment longevity (Niinimäki et al., 2020). The United Nations Environment Programme (El-Shihy & Awaad, 2025; Haines et al., 2023; Zhao et al., 2022) similarly frames the transition to a more sustainable textile value chain around linked priorities: shifting consumption patterns, improving industry practices, and investing in infrastructure. These perspectives caution against treating sustainability as a matter of purchasing a small number of labelled "green" products while overall clothing volumes continue to rise (Liobikienė et al., 2017; Wiederhold & Martinez, 2018). The relevant behavioural challenge includes unnecessary acquisition, repeated trend-based purchases, and owning garments that are rarely used (Gazzola et al., 2020; Khan et al., 2025). The present study therefore focuses on fashion overconsumption rather than sustainable purchase intention alone.

Social media has become an important environment in which fashion information, brand promotion, peer communication, influencer content, and environmental advocacy coexist (Haines et al., 2023). Sustainability communication can make the impacts of textile production and disposal more visible, circulate practical advice about repair and reuse, and connect young audiences with alternative consumption practices. Research on social media and sustainable fashion has examined the role of brand-generated and user-generated content (El-Shihy & Awaad, 2025), including how digital communication may shape awareness, discussion, and consumer responses (Haines et al., 2023; Zhao et al., 2022). However, a platform should not be understood as an inherently sustainable channel. The same visual, interactive, and algorithmically curated environment can promote frequent product discovery, trend participation, influencer-linked shopping, and rapid changes in what is considered fashionable. Consequently, the significance of social media lies in this dual capacity: it can communicate reasons to consume more carefully while also increasing the visibility and social rewards associated with new purchases. This dual capacity creates a conceptual challenge for research and practice. The mere presence of sustainability information does not establish that audiences understand it, trust it, or use it when deciding whether to buy clothing (Manley et al., 2023; Saha et al., 2024; Wai Yee et al., 2016). Sustainability claims can be hard to assess, and greenwashing concerns can weaken the credibility of environmental messages (Badhwar et al., 2024). At the same time, the fast-fashion literature identifies low prices, short trend cycles, hedonic motivations, and social pressures as forces that can sustain frequent purchasing even among consumers who express concern about environmental impacts (Bläse et al., 2024; Mcneill & Moore, 2015). Fear of missing out (FoMO) is particularly relevant because fashion trends are socially visible and time-sensitive; not purchasing can feel like exclusion from a trend or community (Bläse et al., 2024). Thus, communication aimed at reducing overconsumption competes for attention within an environment that also rewards novelty, self-presentation, and immediate gratification.

The resulting awareness–behaviour gap is not necessarily evidence that consumers are insincere or uninformed (Jimenez-Fernandez et al., 2023). Rather, it may reflect the fact that awareness is only one element in a decision shaped by price, access, habit, identity, social norms, trust, and perceived convenience. Research on sustainable fashion has repeatedly documented tensions between pro-environmental attitudes and fashion-related desires, including the wish to remain fashionable and express identity through clothing (Castagna et al., 2022; Mcneill & Moore, 2015). More broadly, attitude–behaviour gap research shows that positive environmental attitudes can coexist with inconsistent consumption practices because motivations and constraints operate simultaneously (Moraes et al., 2012). For Generation Z, the issue is particularly salient in digital environments where environmental information and commercial stimuli are encountered in close proximity. The question is therefore not simply whether young consumers see sustainability content, but whether communication is associated with an internal cognitive process that is itself related to lower overconsumption. The Stimulus–Organism–Response (S-O-R) framework provides a way to specify this proposed process (Gao et al., 2022). Originating in environmental psychology, the framework conceptualizes environmental or informational cues as stimuli that affect internal cognitive or affective states, which are in turn associated with behavioural responses (Mehrabian & Russell, 1974). In the current model, perceived sustainability communication on social media is the Stimulus (S); sustainability awareness is the Organism (O); and self-reported fashion overconsumption is the Response (R). This is an analytical mapping, not an assertion that communication mechanically causes behaviour. S-O-R applications in digital consumer research show how platform cues and marketing stimuli may relate to internal states and consumer responses, while also highlighting the importance of emotions, social influence, and context (Gao et al., 2022). Here, the response variable is overconsumption itself, not a separately measured "reduction" construct, so negative path coefficients indicate an association with lower reported overconsumption.

This study addresses three connected questions: (1) is perceived sustainability communication on social media positively associated with sustainability awareness? (2) Is sustainability awareness negatively associated with fashion overconsumption, and does communication have a negative direct association with overconsumption? (3) Does awareness statistically mediate the relationship between communication and overconsumption? The study contributes by testing an awareness-mediated S-O-R model with a behavioural outcome focused on overconsumption, using survey data from 400 Generation Z respondents in four provinces on Java. The four-province design offers contextual breadth across different provincial settings, but the equal regional quotas are not a probability sample and are not used to estimate regional differences. Practically, the findings are intended to inform public communication, fashion-industry messaging, and creator strategies that move beyond generic awareness raising toward credible, actionable, and lower-consumption choices. The article integrates prior research into this introduction, in accordance with the SSHS IMRAD structure, rather than retaining a separate Literature Review section. The model is guided by the S-O-R framework and by research on sustainable consumption. The framework does not require every stimulus to have a direct effect on a response; it allows the association to be partly transmitted through an internal organismic state. In the present study, sustainability communication refers to respondents' reported encounter with sustainable-fashion content and their perceptions of its clarity, attention value,

credibility, and capacity to stimulate reflection. Sustainability awareness includes recognition of fashion's environmental impacts and textile waste as well as reported consideration of environmental consequences in personal purchasing. Fashion overconsumption captures trend-driven buying, buying without need, buying because an item is fashionable, owning rarely used clothes, and purchasing more than needed. These constructs follow the indicators reported in the study materials.

The first expected relationship is that perceived sustainability communication is positively associated with sustainability awareness. Information that is understandable, attention-generating, credible, and reflective may make environmental consequences more cognitively available. Studies of social-media sustainability communication and fashion influencer content provide a basis for expecting communication to relate to sustainability-related awareness, while also cautioning that engagement metrics are not equivalent to behavioural change (El-Shihy & Awaad, 2025; Haines et al., 2023; Zhao et al., 2022). H1: Sustainability communication on social media is positively associated with sustainability awareness. The second relationship proposes that sustainability awareness is negatively associated with fashion overconsumption. Awareness can provide a cognitive basis for evaluating the necessity of a purchase and the consequences of excess clothing, but it is not expected to eliminate all consumption pressures. Work on sustainable consumption and pro-environmental identity indicates that internal orientations can be associated with behaviour, while fashion-specific research highlights competing motives and practical barriers (Lavuri et al., 2023; Mcneill & Moore, 2015; Pardeshi et al., 2024). H2: Sustainability awareness is negatively associated with fashion overconsumption. The third relationship proposes a direct negative association between sustainability communication and overconsumption. Messages that normalize repair, rewearing, reuse, and deliberate purchasing may provide social and informational cues that make restrained consumption more salient. Nevertheless, the direct relationship is expected to be modest because communication occurs alongside commercial content and because behaviour depends on conditions beyond messaging (Del Olmo Arriaga et al., 2025; UNEP Annual Report, 2023). H3: Sustainability communication on social media is negatively associated with fashion overconsumption.

Sustainability awareness is proposed as a mediator between communication and overconsumption. Under S-O-R, an external stimulus may be associated with a response partly through an internal cognitive state. A significant indirect pathway would be consistent with this process model, although cross-sectional data cannot establish temporal sequence or causal mediation. This distinction is important: the analysis tests a statistical indirect association and does not establish that awareness necessarily precedes or causes lower overconsumption. H4: Sustainability awareness mediates the association between sustainability communication and fashion overconsumption.

METHOD

This study used a quantitative, cross-sectional survey to examine associations among sustainability communication on social media (X), sustainability awareness (M), and fashion overconsumption (Y). The target group was Generation Z respondents aged 17–27 years who lived in DKI Jakarta, West Java, East Java, or the Special Region of Yogyakarta, actively used

Instagram, TikTok, or YouTube, and had purchased fashion products in the preceding 12 months. Non-probability purposive sampling with regional quotas was used, with 100 respondents recruited from each province (N = 400). The four provinces were selected to provide contextual variation across provincial settings in Java; the design was not intended to represent all Indonesian Generation Z consumers, and no regional multigroup comparison was conducted. The sample size exceeded the technical benchmark described in the study materials for the specified PLS-SEM model, but the non-probability design means that conventional population-level margins of error should not be inferred.

The questionnaire operationalized X through five indicators: encountering sustainable-fashion content (X1), ease of understanding (X2), attention attraction (X3), trust (X4), and reflection on environmental impacts (X5). M was measured with four indicators: awareness of the fashion industry's environmental impacts (M1), awareness that excessive clothing purchases increase textile waste (M2), perceived need to reduce fashion consumption (M3), and consideration of environmental impacts before purchase (M4). Y was measured with five indicators: buying to follow trends (Y1), buying without need (Y2), buying because an item is fashionable (Y3), owning many rarely used clothes (Y4), and buying more than needed (Y5). The available study documentation does not establish a formal content-validity index, a documented back-translation process, or a separately documented pilot sample; this manuscript therefore does not claim that these procedures were completed. The final submitted version should identify the original source of each adapted item if those source records are available. Participation was voluntary, electronic informed consent was obtained, and the analysis used no personal identifiers. Because respondents included 17-year-olds, the authors should verify and report the applicable institutional ethics approval or waiver and the required consent procedure; no approval number is provided here.

Descriptive statistics were used to summarize the respondent profile and item means and standard deviations. PLS-SEM was conducted in SmartPLS 4. The measurement model was assessed using outer loadings, average variance extracted (AVE), Cronbach's alpha, rho_A, composite reliability, the Fornell–Larcker criterion, and the heterotrait–monotrait ratio (HTMT). The structural model was assessed using collinearity diagnostics (VIF), coefficients of determination (R^2 and adjusted R^2), predictive relevance (Q^2predict), effect sizes (f^2), path coefficients, and bootstrapped confidence intervals. The supplied analysis summary reports 5,000 bootstrap subsamples. These analyses follow common PLS-SEM reporting principles (Hair et al., 2022; Kock & Hadaya, 2018; Sarstedt et al., 2022). Since the data are cross-sectional and self-reported, coefficients are interpreted as associations, not causal effects.

RESULTS AND DISCUSSION

Respondent Profile Analysis

Table 1. Respondent profile

Characteristic	Category	n	%
Gender	Women	268	67.0
Gender	Men	132	33.0
Age	17–20 years	124	31.0

Age	21–24 years	168	42.0
Age	25–27 years	108	27.0
Province	DKI Jakarta	100	25.0
Province	West Java	100	25.0
Province	East Java	100	25.0
Province	Special Region of Yogyakarta	100	25.0
Fashion purchase frequency (past 3 months)	1–2 times	142	35.5
Fashion purchase frequency (past 3 months)	3–5 times	176	44.0
Fashion purchase frequency (past 3 months)	>5 times	82	20.5
Primary platform	Instagram	156	39.0
Primary platform	TikTok	192	48.0
Primary platform	YouTube	52	13.0

Based on Table 1 above, the analytical sample comprised 400 respondents. Women accounted for 67.0% and men 33.0%. The largest age group was 21–24 years (42.0%). Regional quotas produced equal counts in each province. TikTok was the most frequently reported primary platform (48.0%), followed by Instagram (39.0%) and YouTube (13.0%). In the preceding three months, 44.0% reported purchasing fashion products 3–5 times, while 20.5% reported more than five purchases. These values describe the respondents in this dataset; they are not estimates of the population distribution of Indonesian Generation Z.

Descriptive Results and the Awareness–Behaviour Tension

Table 2. Descriptive statistics of measurement indicators.

Construct	Indicator	Mean	SD	Reported category
Sustainability communication	X1	3.86	0.71	High
Sustainability communication	X2	3.92	0.68	High
Sustainability communication	X3	4.05	0.64	High
Sustainability communication	X4	3.54	0.79	Moderately high
Sustainability communication	X5	3.78	0.73	High
Sustainability awareness	M1	4.12	0.61	Very high
Sustainability awareness	M2	3.95	0.69	High
Sustainability awareness	M3	3.41	0.84	Moderately high
Sustainability awareness	M4	3.28	0.88	Moderately high
Fashion overconsumption	Y1	3.71	0.77	High
Fashion overconsumption	Y2	3.38	0.85	Moderately high
Fashion overconsumption	Y3	3.62	0.81	High
Fashion overconsumption	Y4	3.49	0.86	Moderately high
Fashion overconsumption	Y5	3.33	0.89	Moderately high

Based on Table 2 above, as also illustrated in Figure 1, The item means show that respondents reported comparatively favourable perceptions of sustainability communication. Among the communication indicators, content attracting attention (X3, M = 4.05, SD = 0.64) had the highest mean, while trust in sustainability information (X4, M = 3.54, SD = 0.79) had the lowest. Awareness that the fashion industry has environmental impacts (M1, M = 4.12, SD = 0.61) was the highest awareness indicator, followed by awareness that excessive clothing purchases increase textile waste (M2, M = 3.95, SD = 0.69). However, perceived need to reduce consumption (M3, M = 3.41, SD = 0.84) and consideration of environmental impacts before purchase (M4, M = 3.28, SD = 0.88) were lower. The distinction between recognizing a problem and incorporating it into personal purchase decisions is important for interpreting the model.

The five overconsumption indicators also showed moderate-to-high or high means in the categories supplied with the dataset. Buying because of trends (Y1, M = 3.71, SD = 0.77) and buying because an item is fashionable (Y3, M = 3.62, SD = 0.81) were the highest. Buying more than needed (Y5, M = 3.33, SD = 0.89) and buying without need (Y2, M = 3.38, SD = 0.85) were comparatively lower but remained elevated relative to the scale's midpoint. This item-level pattern is consistent with a sample-level awareness–behaviour tension: respondents recognize fashion's environmental impacts while also reporting trend-oriented consumption. It is not possible to infer from group means alone that the individuals with the highest awareness are also the individuals who overconsume most. That stronger claim would require respondent-level profiles, correlations, or subgroup analyses not included in the supplied results.

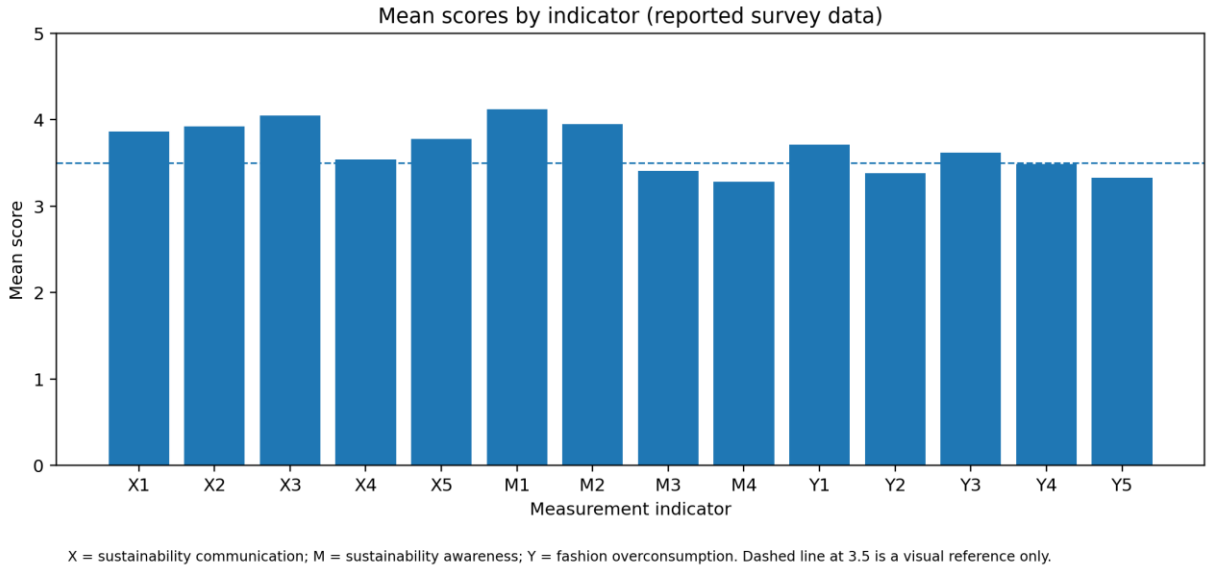


Figure 1. Mean scores across communication, awareness, and overconsumption indicators

Measurement Model Assessment

Table 3. Consolidated reliability and convergent-validity assessment.

Construct	Loading range	AVE	Cronbach's α	rho_A	Composite reliability
Sustainability communication (X)	0.712–0.841	0.612	0.847	0.852	0.886
Sustainability awareness (M)	0.705–0.823	0.597	0.801	0.808	0.856
Fashion overconsumption (Y)	0.698–0.856	0.634	0.862	0.868	0.897

As shown in Table 3, the reported outer-loading ranges were 0.712–0.841 for sustainability communication, 0.705–0.823 for sustainability awareness, and 0.698–0.856 for fashion overconsumption. The lowest loading, 0.698, is close to the conventional 0.70 guideline; it should not be described as strictly exceeding that benchmark. AVE values were 0.612, 0.597, and 0.634, respectively, all above 0.50. The results therefore support convergent validity at the construct level according to the supplied summary. As item-level loadings and full bootstrap output are not reproduced in the supplied summary, the analysis below reports the available ranges rather than inventing indicator-specific estimates.

Table 4. Consolidated discriminant-validity statistics.

Discriminant-validity assessment	X	M	Y
Fornell–Larcker diagonal (√AVE)	0.782	0.773	0.797
Correlation: X with other constructs	—	0.486	−0.341
Correlation: M with other constructs	0.486	—	−0.512
Correlation: Y with other constructs	−0.341	−0.512	—
HTMT: X–M	—	0.584	—
HTMT: X–Y	—	—	0.398
HTMT: M–Y	—	—	0.592

Internal consistency was satisfactory across the three constructs. Cronbach's alpha ranged from 0.801 to 0.862, rho_A from 0.808 to 0.868, and composite reliability from 0.856 to 0.897. For discriminant validity, Table 4 shows the square roots of AVE were 0.782 for X, 0.773 for M, and 0.797 for Y; each exceeded the absolute correlations reported between that construct and the others. HTMT ratios ranged from 0.398 to 0.592, below commonly applied 0.85 and 0.90 guidelines. Taken together, these statistics are consistent with acceptable internal consistency and construct distinctiveness in the reported model (Hair et al., 2022). They do not, however, replace a full item-level audit or documented evidence of content validity.

Structural Model and Hypothesis Testing

Table 5. Structural-model explanatory, predictive, and collinearity statistics.

Model assessment	Sustainability awareness (M)	Fashion overconsumption (Y)
R^2	0.236	0.318
Adjusted R^2	0.234	0.315
Q^2predict	0.218	0.285
Inner VIF	1.000 (X → M)	1.309 (X and M → Y)

As shown in Table 5, the model explained 23.6% of the variance in sustainability awareness (R^2 = 0.236; adjusted R^2 = 0.234) and 31.8% of the variance in fashion overconsumption (R^2 = 0.318; adjusted R^2 = 0.315). The reported Q^2predict values were positive for both endogenous constructs (0.218 for awareness and 0.285 for overconsumption), indicating predictive relevance in the supplied SmartPLS output. Inner VIF values were 1.000 for X predicting M and 1.309 for each predictor of Y. Outer VIF values ranged from 1.512 to 2.215. These values do not suggest a material collinearity concern under common thresholds.

Table 6. Consolidated structural paths and mediation results.

Hypothesis / path	β	SD	t	p	95% CI	f^2/ interpretation
H1: X → M	0.486	0.053	9.217	< .001	[0.381, 0.587]	0.309; supported
H2: M → Y	−0.398	0.053	7.542	< .001	[−0.501, −0.292]	0.183; supported
H3: X → Y	−0.156	0.058	2.684	.007	[−0.271, −0.041]	0.028; supported
H4: X → M → Y	−0.193	0.036	5.328	< .001	[−0.267, −0.125]	Indirect effect; partial mediation
Approximate total X → Y	−0.349	—	—	—	—	Direct + indirect coefficients

All four hypotheses were supported by the reported path estimates as presented in Table 6. Sustainability communication was positively associated with sustainability awareness (β = 0.486, SD = 0.053, t = 9.217, p < .001, 95% CI [0.381, 0.587], f^2 = 0.309). Sustainability awareness was negatively associated with fashion overconsumption (β = −0.398, SD = 0.053, t = 7.542, p < .001, 95% CI [−0.501, −0.292], f^2 = 0.183). The direct association between communication and overconsumption was negative but smaller (β = −0.156, SD = 0.058, t = 2.684, p = .007, 95% CI [−0.271, −0.041], f^2 = 0.028). The specific indirect association through awareness was also negative and significant (β = −0.193, SD = 0.036, t = 5.328, p < .001, 95% CI [−0.267, −0.125]). The direct and indirect paths have the same substantive direction, which is consistent with complementary partial mediation. The approximate total association, calculated by adding the reported direct and indirect coefficients, is −0.349; it should be treated as an arithmetic summary of the supplied estimates.

DISCUSSION

Sustainability Communication and Awareness

The positive association between sustainability communication and awareness (β = 0.486) supports H1 and is consistent with the proposed S-O-R interpretation. In this model, communication is not defined merely as the number of times a respondent sees a post; its indicators include comprehension, attention, trust, and reflection. This matters because a message that is repeatedly encountered but not understood or trusted may be less likely to support awareness. Research on sustainable-fashion communication has similarly emphasized the roles

of social media content, influencer communication, and user-generated discussion in shaping how sustainability is presented and interpreted (El-Shihy & Awaad, 2025; Haines et al., 2023; Zhao et al., 2022; Zimand-Sheiner & Lissitsa, 2024). The present finding is an association between perceived communication and awareness, not a causal estimate of the effect of a particular platform, message type, or campaign.

The lowest communication mean was the trust indicator (X4 = 3.54), even though attention attraction was highest (X3 = 4.05). This gap between attention and trust is substantively important. Sustainability content can be visually engaging while remaining difficult to verify, especially when brands make broad claims without clear evidence. A systematic review of green marketing and greenwashing in fashion identifies the credibility of claims as a central issue in the relationship between marketing communication and consumer interpretation (Badhwar et al., 2024). Thus, communication practitioners should not treat reach or aesthetic appeal as sufficient indicators of effectiveness. Transparent claims, traceable information, and clear explanations of what a product's sustainability claim does and does not cover are more defensible communication goals.

The result also cautions against treating social media as a single, uniform stimulus. The primary-platform profile in this sample was weighted toward TikTok (48.0%) and Instagram (39.0%), with YouTube used as the primary platform by 13.0%. However, platform-specific effects were not tested. Differences in short-form video, visual storytelling, and longer-form explanation may be relevant hypotheses, but the current data do not establish that one platform is more effective than another. Future research should measure content type, exposure frequency, source credibility, perceived authenticity, and platform affordances separately rather than infer platform effects from a single primary-platform category.

Awareness and Fashion Overconsumption

The negative association between awareness and overconsumption ($\beta = -0.398$) was the strongest direct path in the model, supporting H2. This is consistent with the idea that awareness of environmental impacts and textile waste is related to more reflective consumption decisions. It also fits broader work connecting pro-environmental self-identity and sustainable consumption behaviour (Lavuri et al., 2023). Nevertheless, the descriptive means indicate that awareness is unevenly translated into personal consumption. Respondents scored highly on recognizing the environmental impact of fashion (M1 = 4.12) and the contribution of excessive purchases to textile waste (M2 = 3.95), but lower on the perceived need to reduce their own consumption (M3 = 3.41) and on considering environmental impacts before purchase (M4 = 3.28). This distinction suggests that general recognition of a problem may be easier to report than consistent application of that recognition at the moment of purchase.

The same pattern appears in the overconsumption indicators. Trend-following (Y1 = 3.71) and buying because an item is fashionable (Y3 = 3.62) had higher means than buying more than needed (Y5 = 3.33) or buying without need (Y2 = 3.38). This may indicate that overconsumption is not experienced solely as a conscious decision to buy unnecessary items. It may also be embedded in everyday practices of keeping up with trends, maintaining a desired appearance, and treating newness as a normal feature of fashion participation. These interpretations are

plausible readings of the item pattern, not directly tested psychological explanations. The study did not measure FoMO, identity, materialism, affordability, or social norms as separate variables.

This is where the awareness–behaviour tension must be interpreted carefully. High group-level awareness and elevated group-level overconsumption means do not demonstrate a respondent-level paradox by themselves. A respondent with a high awareness score might report lower overconsumption, while another respondent might have lower awareness and higher overconsumption. The negative structural path is compatible with an overall negative association between the constructs, while the descriptive means show that overconsumption remains present in the sample. The two results are not contradictory: an association can be negative even when the mean level of the outcome is not low. To establish how strongly awareness and overconsumption coexist within the same individuals, future analysis should examine respondent-level cross-tabulations, latent-score plots, quantile groups, or profile analysis, provided the original data are available.

The wider literature helps explain why awareness alone may be insufficient. Sustainable fashion choices can be constrained by price, availability, style preferences, and doubts about the credibility of environmental claims, while fast-fashion systems are designed around low prices and rapid (Mcneill & Moore, 2015; Niinimäki et al., 2020; *UNEP Annual Report*, 2023). Fear of missing out can intensify trend-related buying intentions in fast fashion (Bläse et al., 2024). These factors were not measured in the present model and therefore cannot be asserted as mediators or moderators of the observed relationships. They should instead be understood as candidate explanations that could be incorporated into future studies.

Direct Association of Communication with Overconsumption

The direct path from communication to overconsumption was negative and statistically significant ($\beta = -0.156$), but its reported effect size was small ($f^2 = 0.028$). This supports H3 while indicating that communication's direct statistical association with the outcome is modest once awareness is included in the model. One implication is that the quantity of sustainability messaging should not be equated with behaviour change. A message may inform or attract attention without overcoming practical barriers, commercial prompts, or habitual shopping. The direct association may also capture pathways not represented by awareness, such as normative cues or social visibility of reuse practices, but the current model does not identify which alternative process is responsible.

The result is aligned with the broader idea that sustainable fashion requires more than individual-level persuasion. UNEP's textile roadmap emphasizes that shifting consumption patterns must proceed alongside changes in industry practice and infrastructure (*UNEP Annual Report*, 2023). Public communication can support these changes, but it cannot independently make durable clothing affordable, ensure repair services are available, or guarantee credible environmental labelling. Consequently, communication campaigns should be evaluated with multiple indicators: comprehension and trust, reflection on necessity, reported purchase restraint, garment use duration, repair and reuse behaviour, and, where feasible, objective purchasing or wardrobe data.

Mediating Role of Sustainability Awareness

The indirect association from communication through awareness to overconsumption was negative and significant ($\beta = -0.193$), while the direct path remained significant. This pattern is consistent with complementary partial mediation and supports H4. The indirect coefficient was larger in absolute magnitude than the direct coefficient (0.193 compared with 0.156), suggesting that the model's proposed organismic state accounts for an important part of the estimated relationship. Under the S-O-R interpretation, perceived sustainability communication is associated with awareness, which is in turn associated with lower overconsumption. The finding therefore supports the usefulness of modelling an internal cognitive construct rather than assuming that external communication is related to behavioural outcomes only through a direct route.

However, the term "mediation" should not be interpreted as proof of causal sequence in this study. All constructs were measured within a cross-sectional survey, so the temporal ordering of communication, awareness, and consumption cannot be established. It is also possible that people already concerned about sustainability pay more attention to sustainability content, creating a reciprocal relationship. The indirect estimate is a statistical pattern consistent with the proposed theoretical process, not evidence that a communication intervention would necessarily produce a particular reduction in purchases. Longitudinal or experimental designs would be required to test whether changes in communication exposure precede changes in awareness and whether those changes are followed by measurable changes in consumption.

Partial mediation is also a reason not to treat awareness as the only mechanism. The remaining direct association suggests that other measured or unmeasured processes may be relevant, although the present study does not identify them. Future models could examine trust in environmental claims, perceived social norms, fashion involvement, self-identity, price consciousness, FoMO, and digital fatigue. Such variables should be selected and measured using validated instruments, and their role should be specified before testing rather than added after seeing the results. A more complete model could also distinguish exposure to sustainability content from exposure to fashion commerce and influencer promotion.

Regional Context and Generalizability

The four-province design was intended to provide contextual variation, and the equal quotas ensure that no one province dominates the descriptive sample. Yet equal quotas do not make the sample statistically representative of the four provinces or Indonesia. Recruitment was purposive, the sample was restricted to active users of selected platforms and recent fashion purchasers, and no probability-based sampling frame was used. Furthermore, the study did not conduct multigroup analysis; therefore, it cannot claim that the paths differ across DKI Jakarta, West Java, East Java, and the Special Region of Yogyakarta. Regional comparisons should be reserved for future work using adequate group sizes, measurement-invariance assessment, and explicitly designed multigroup tests.

The demographic profile also calls for caution. Women comprised 67.0% of the sample, which may influence the overall mean patterns if fashion practices differ by gender, but this

dataset does not establish the direction or magnitude of any gender differences. The study similarly does not establish differences across age bands or primary platforms. These are possible avenues for future analysis, not findings of the current article. Reporting these limits strengthens rather than diminishes the contribution: the model provides evidence about associations in the observed sample, while delineating what the data cannot support.

CONCLUSION

This study examined the relationships among social-media sustainability communication, sustainability awareness, and fashion overconsumption among 400 Generation Z respondents aged 17–27 years from four provinces in Indonesia. The results supported all four hypotheses: communication was positively associated with awareness ($\beta = 0.486$), awareness was negatively associated with overconsumption ($\beta = -0.398$), communication had a smaller negative direct association with overconsumption ($\beta = -0.156$), and the indirect association through awareness was significant ($\beta = -0.193$), consistent with complementary partial mediation. The findings extend the application of the S-O-R framework by positioning awareness as an important internal state associated with lower overconsumption, while avoiding a causal interpretation of cross-sectional estimates. Descriptive scores also showed high recognition of fashion's environmental impacts alongside elevated trend-oriented consumption indicators, underscoring that awareness and behaviour should not be treated as interchangeable. For policymakers, this supports practical campaigns that encourage need-based purchasing, garment care, repair, reuse, swapping, and longer use. Fashion firms should make environmental claims transparent and verifiable, while creators and platforms can make lower-consumption practices visible, credible, and socially relevant. These actions should be paired with affordable alternatives and supporting infrastructure because communication alone cannot remove structural barriers.

The findings should be interpreted in light of several limitations: the cross-sectional design does not establish causal direction; purposive sampling limits generalizability; self-reported measures may not reflect actual transactions or garment-use patterns; and the available documentation does not confirm formal content validity, back-translation, or pilot-testing procedures. The study also did not test regional or platform-level differences and did not include potential mechanisms such as price sensitivity, social norms, trust, FoMO, or digital fatigue. Future research should use longitudinal or experimental designs, integrate behavioural data, document instrument development transparently, and test additional psychological and contextual variables. Probability-based sampling and measurement-invariance procedures would strengthen future regional or demographic comparisons. These extensions can establish when sustainability communication is most likely to support sustained reductions in fashion overconsumption.

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