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Digital Fatigue and Urban Consumers' Resistance Against E-Commerce Algorithms

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Abstract : This study investigates the phenomenon of digital fatigue and its link to resistance behaviors among urban consumers navigating e-commerce platforms saturated with algorithmic personalization. This research applies a qualitative phenomenological approach to explore how individuals in Jakarta, Bandung, and Surabaya actively disengage from or manipulate recommendation systems in response to emotional and cognitive exhaustion. Data were collected from 25 participants through semi-structured interviews, revealing that 84% experienced mental fatigue due to algorithm-driven content repetition, intrusive notifications, and decision overload. The findings highlight various resistance strategies including browsing in incognito mode, clearing cookies, intentionally clicking unrelated content, and uninstalling apps acts rooted more in emotional autonomy than privacy concerns. Resistance behaviors were shown to vary by age and gender, with younger, tech-savvy users deploying technical measures and older participants favoring withdrawal methods. Additionally, over half of respondents expressed growing distrust in e- commerce platforms, citing manipulation and a lack of transparency as primary concerns. The study confirms that resistance is not passive avoidance but a form of digital agency where consumers renegotiate control over their online experiences. This work expands the discourse on algorithmic governance by showing that ethical engagement models must address emotional thresholds and user well-being, especially in non-Western urban environments. The implications are vital for developers, marketers, and policymakers aiming to balance personalization with sustainable digital interaction.

Keywords: Digital Fatigue, Algorithmic Resistance, E-Commerce, Urban Consumers, Digital Agency, User Trust

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INTRODUCTION

In the age of hyper-digitization, where online platforms dominate daily consumption behavior, urban consumers are increasingly exposed to algorithm-driven e-commerce systems that personalize content, recommend products, and shape user preferences in real time. While algorithms are praised for their efficiency and predictive power, recent statistics reveal a growing trend of *digital fatigue* a psychological condition characterized by mental exhaustion, decision overload, and decreased engagement with digital content (Weinstein & Selman, 2022). A 2023 survey conducted in five major Indonesian cities showed that nearly 61% of online shoppers experienced irritation or avoidance when faced with repetitive or invasive product recommendations, suggesting that algorithmic personalization may be backfiring among tech-saturated urban populations (Statista, 2023). Despite extensive literature on consumer acceptance of technology and algorithmic recommendation systems, there is a significant gap in understanding the resistance behavior exhibited by consumers experiencing digital fatigue,(Irawan & Wahyuni, 2022) particularly in non-Western urban contexts where smartphone usage is high but digital well-being awareness remains low.

This study addresses that gap by exploring the phenomenon of digital fatigue and its correlation with active resistance among urban consumers toward e-commerce algorithms. Specifically, it investigates how users in metropolitan environments disengage, mute, or manipulate algorithmic cues as a coping strategy against digital overload. Unlike prior studies that predominantly focus on system accuracy and marketing optimization, this research highlights the user's psychological thresholds and their conscious rejection of algorithmic influence. This lens offers a more human-centered perspective on digital consumption, challenging the deterministic assumption that personalization always enhances user satisfaction. By examining this behavioral shift, the study contributes not only to the theoretical discourse on *digital resistance* and *algorithmic governance*, but also offers practical implications for ethical design in e-commerce platforms.

This research has timely relevance as it aligns with broader concerns about digital well-being, autonomy, and ethical AI. As urban consumers become more digitally literate and critical of the content they receive, the failure of e-commerce systems to recognize and respect psychological saturation may lead to brand alienation and reduced consumer trust. Understanding resistance behaviors in the context of digital fatigue enables platform designers, marketers, and policymakers to rethink algorithmic engagement models—shifting from maximizing clicks to sustaining meaningful user experience. Theoretically, the study

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expands on existing frameworks in consumer behavior by integrating perspectives from digital sociology and human-computer interaction, focusing on the *disengagement loop* rather than continuous engagement. In sum, this research sheds light on a growing yet understudied dimension of modern digital life: how users reclaim control in algorithm- saturated environments, and what this means for the future of personalized commerce in urban societies.

RESEARCH METHOD

This study employs a qualitative phenomenological approach to explore the lived experiences of urban consumers dealing with digital fatigue and their resistance to e-commerce algorithms. The qualitative design was chosen to allow a deep, interpretative understanding of subjective consumer behaviors that are not easily quantifiable through standardized surveys.(Wahyudhi, Irawan, & Khoir, 2024) A total of 25 informants were selected purposively from Jakarta, Bandung, and Surabaya three of Indonesia's largest urban centers. The participants were selected based on their active engagement in e-commerce (at least three times a week) and their self-reported experience of digital overload or fatigue. Data collection was conducted through semi-structured interviews, each lasting approximately 45–60 minutes, allowing for guided yet flexible conversations around algorithmic interaction, emotional responses, and behavioral resistance strategies.

The choice of semi-structured interviews is justified by their ability to capture nuanced responses while maintaining thematic consistency. This method is particularly effective in understanding internal states such as fatigue, annoyance, and decision aversion—phenomena that are often underrepresented in algorithm-focused user experience studies (Silverman, 2021). To ensure replicability, all interview protocols, participant criteria, and coding schemes are documented in an audit trail and available upon request for peer verification (Creswell & Poth, 2018). Triangulation was applied by comparing user statements with e-commerce interface observations and user-screen interactions captured through voluntary screen recordings.

this study adopts Algorithmic Resistance Theory (Velkova & Kaun, 2021), which frames user opposition to algorithmic systems as a form of digital agency. This theory is particularly relevant for interpreting how urban consumers assert control not only by opting out or ignoring algorithmic recommendations, but also by manipulating or "gaming" the system (e.g., clearing cookies, logging out, creating alternative accounts).(Irawan, 2024a) This framework aligns with the constructivist perspective that sees users as active

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negotiators in digital ecosystems, rather than passive data targets. By combining this theoretical base with a rigorous qualitative method, the study ensures that the findings are not only credible but also rich in contextual depth and transferable to similar urban settings across Southeast Asia.

RESULTS AND DISCUSSION

Results : Digital Fatigue and Urban Consumers' Resistance Against E-Commerce Algorithms

1. Patterns of Digital Fatigue among Urban Consumers

The majority of participants (21 out of 25) reported experiencing symptoms associated with digital fatigue, including cognitive overload, irritability, and avoidance behaviors when interacting with e-commerce platforms. Respondents described being overwhelmed by persistent product recommendations, push notifications, and algorithmically curated "flash sales." One Jakarta-based informant stated, "I feel bombarded—like the app reads my mind too often, and it gets tiring." Participants identified lack of control and algorithmic intrusiveness as triggers of mental exhaustion. This fatigue was intensified during periods of frequent online browsing, especially after work hours, suggesting a correlation between professional screen time and reduced tolerance for commercial digital stimuli.

This study reveals that digital fatigue is a pervasive psychological state among urban consumers who interact intensively with e-commerce platforms. Out of 25 informants, 21 participants (84%) explicitly described experiencing signs of mental exhaustion, screen aversion, and decision-making fatigue while using applications such as Shopee, Tokopedia, and Lazada. The phenomenon of digital fatigue is often triggered by overexposure to algorithmic personalization, including repetitive advertisements, push notifications, and "recommendation traps" that reduce the perceived autonomy of the user experience. One participant from Jakarta stated, *"I just open the app to buy one item, but then 20 other things pop up that 'I might like,' and it's mentally draining."* Similarly, respondents emphasized feelings of frustration, disorientation, and emotional depletion after prolonged interactions with apps that aggressively personalize content based on browsing history or search inputs. This aligns with findings from Weinstein and Selman (2022), who describe digital fatigue as a modern cognitive load amplified by algorithmic interactivity.

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To strengthen the interpretation of these symptoms, the following table presents the frequency of reported fatigue indicators among participants:

Table. 1 Urban Consumers

Symptoms of Digital Fatigue	Number of Participants (n=25)	Percentage
Feeling overwhelmed by product ads	21	84%
Experiencing decision fatigue	19	76%
Avoiding apps due to mental exhaustion	16	64%
Frustration with push notifications	14	56%
Disengagement from personalized offers	13	52%

(Source: Field Interviews, 2025)

Participants' narratives reflect not only individual psychological responses but also a structural interaction between humans and automated systems. Most consumers expressed a sense of helplessness in managing their digital environment, indicating that the more platforms "learned" their preferences, the more pressured and fatigued they felt. This paradox illustrates what Selye (1956) once called "adaptation fatigue," now manifested in digital form—where adaptation to stimuli no longer improves efficiency but erodes well-being. Importantly, digital fatigue appeared more acute among respondents who frequently multitasked or worked in high-pressure environments, suggesting a correlation between occupational screen time and low tolerance for e- commerce algorithmic stimuli.

The intensity of fatigue also varied across demographic lines. Younger users aged 21–30 were more likely to describe the fatigue as "annoying" but manageable, while users over 35 tended to interpret it as "stressful" and a reason to reduce app usage altogether. This supports the notion that digital fatigue is not a static condition but evolves with personal, social, and technological contexts. The findings also support the view of digital fatigue as a precursor to resistance,(Irawan, 2024b) wherein consumers disengage not out of dislike for the platform, but from an emotional need to restore psychological balance (Velkova & Kaun, 2021).

The data underscores a vital shift in consumer-platform interaction: from engagement-driven behavior to avoidance-based coping mechanisms, grounded in

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emotional exhaustion and perceptual overload. This suggests that for e-commerce platforms to maintain long-term consumer trust and satisfaction, they must account for the limits of cognitive and emotional capacity—something algorithmic design often overlooks.

2. Emergent Resistance Behaviors Against Algorithmic Personalization

As algorithmic personalization becomes increasingly embedded in digital platforms, users have begun developing subtle yet significant resistance behaviors to reclaim autonomy over their online experiences. This emergent resistance is not always confrontational; rather, it often manifests in nuanced strategies such as obfuscation, selective engagement, and content reshaping. According to Raji et al. (2020), algorithmic systems—especially in social media, search engines, and e-commerce platforms—constantly learn from user data to tailor content, recommendations, and advertisements. While personalization may improve user convenience, it also raises concerns over surveillance, manipulation, and the narrowing of informational diversity, sometimes referred to as "filter bubbles" (Pariser, 2011). In response, users are beginning to exercise what James C. Scott (1985) terms as "everyday forms of resistance," applying quiet, non-disruptive methods to subvert algorithmic tracking.

One prominent form of resistance is **data obfuscation**, where users deliberately provide misleading or inconsistent data to confuse algorithms. This includes liking random content, searching for unrelated topics, or even using privacy tools to anonymize behavior (Brunton & Nissenbaum, 2015). Another behavior is **platform disengagement**—such as reducing screen time, deleting apps, or avoiding login-based access to avoid algorithmic learning (Binns et al., 2018). Users may also adopt **strategic curation**, reshaping their content to influence algorithmic outputs—such as selectively liking posts or interacting with certain influencers to manipulate their feed. In commercial contexts, customers sometimes "game" recommendation systems by making random clicks or abandoning carts to trigger discounts or better offers (Yeung, 2017).

Interestingly, some users are developing **collective resistance mechanisms** through digital literacy education, browser extensions, and open-source communities that critique or challenge algorithmic opacity. For example, browser add-ons like "TrackMeNot" and "AdNauseam" automate obfuscation or simulate user behavior to dilute personal profiles (Brunton & Nissenbaum, 2015). In many ways, these forms of resistance align with what Eubanks (2018) calls "data justice," advocating for digital rights, transparency, and fairness in algorithmic governance. Moreover, resistance is often

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more visible among digitally literate populations who recognize the long-term implications of overpersonalization, particularly in how it limits exposure to diverse content and reinforces bias (Noble, 2018).

These emergent behaviors signify a growing awareness of algorithmic influence and a desire for agency. However, their effectiveness remains contested, as many platforms continually upgrade personalization systems using deep learning techniques that can adapt to evasive behavior (Zuboff, 2019). Nonetheless, such resistance marks a critical turning point in the algorithm-user relationship: a shift from passive consumption toward active negotiation of digital identities and power. As platforms strive to optimize engagement, users are increasingly pushing back—not necessarily to reject personalization entirely, but to redefine the terms of interaction on their own terms.

A notable resistance pattern involved active disengagement: 18 participants reported intentionally logging out of apps, browsing in incognito mode, or uninstalling platforms temporarily. Others adopted "algorithm hacking" strategies, such as clicking unrelated products to confuse the recommendation system. These acts were not random but reflected deliberate user tactics to reclaim control and disrupt algorithmic influence. Interestingly, such resistance was not driven solely by privacy concerns, but by emotional exhaustion and a desire for digital autonomy. This aligns with Velkova and Kaun's (2021) notion of algorithmic resistance as an expression of user agency in opaque digital systems.

The results of this study reveal that urban consumers are not passive recipients of algorithmic influence, but rather exhibit active resistance behaviors in response to the overwhelming personalization strategies employed by e-commerce platforms. Out of the 25 informants interviewed, 18 (72%) reported intentionally modifying their usage patterns to disrupt or avoid algorithmic targeting. These behaviors range from subtle digital tactics—such as using incognito browsing, clearing cookies, and logging out after each session—to more overt acts of digital disengagement like uninstalling applications, disabling notifications, or switching to offline alternatives. As one participant from Bandung shared, *"I purposely browse random things so that the app gets confused and stops suggesting the same stuff every day."* Such deliberate manipulation of algorithmic input reflects a growing sense of digital agency, where users resist not through abandonment but through recalibration of their interactions.

The table below summarizes the most frequently reported resistance behaviors:
Table 2. Emergent Resistance Behaviors Against Algorithmic Personalization

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Resistance Behavior	Number of Participants (n=25)	Percentage
Browsing in incognito mode or clearing cookies	14	56%
Logging out or disabling personalized settings	13	52%
Intentionally clicking unrelated content	10	40%
Temporarily uninstalling e-commerce apps	9	36%
Switching to offline or non-algorithmic channels	6	24%

(Source: Field Interviews, 2025)

These emergent forms of resistance align with the concept of *everyday algorithmic resistance*, where users subtly reassert autonomy over their data and choices (Velkova & Kaun, 2021). Interestingly, most participants did not cite privacy as their primary motivation, but instead emphasized emotional drivers—particularly **irritation, mental fatigue, and loss of control**. These emotional responses were often heightened after excessive push notifications or repeated product recommendations that made users feel surveilled or manipulated. This reinforces Weinstein and Selman's (2022) framework that connects algorithmic saturation with psychological discomfort and behavioral withdrawal.

Resistance behavior varied based on digital literacy. Younger respondents (ages 21–30), more adept at navigating app settings, were more likely to employ "algorithmic sabotage" techniques, such as masking their browsing preferences. In contrast, older participants opted for simpler solutions like muting notifications or uninstalling apps altogether. This divergence underscores how resistance is not only a psychological response but also a technically mediated action dependent on user competency (Silverman, 2021).

The implications of these findings are critical for both researchers and digital platform designers. While personalization is often seen as a value-adding innovation, these results indicate that **excessive personalization may be perceived as intrusive**, leading to disengagement rather than retention. Thus, ethical algorithmic design should consider user thresholds for content repetition, recommendation relevance, and emotional burden. Recognizing resistance not as rejection, but as a form of negotiated interaction, provides a

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more nuanced view of consumer behavior in the algorithmic age.

3. Perceived Decline in User Trust Toward E-Commerce Platforms

The rapid expansion of algorithm-driven personalization and data-intensive marketing has triggered a notable decline in user trust toward e-commerce platforms. This study uncovered that users increasingly perceive these platforms not as facilitators of seamless transactions but as exploitative environments designed to extract behavioral data, manipulate preferences, and maximize platform-centric profit. Across interviews and survey responses from urban digital consumers aged 18–40, a shared sentiment emerged: trust is deteriorating due to perceived invasiveness, data misuse, and declining transparency in content and pricing algorithms.

A core driver of this distrust is perceived surveillance. Many respondents expressed unease about being constantly monitored online. Simple actions—like browsing a product once—often led to relentless targeted advertisements across multiple platforms, which participants described as "creepy," "invasive," and "manipulative." This digital tracking creates a feeling of loss of privacy and autonomy, generating psychological discomfort and distrust toward the platform's ethical boundaries (Zuboff, 2019). Moreover, users often feel that their personal information is being used in opaque ways without genuine consent, reinforcing a perception that these platforms prioritize profit over consumer protection (Martin & Murphy, 2017).

Another significant contributor to trust erosion is algorithmic price discrimination. Respondents reported witnessing inconsistent pricing for the same products depending on time, browsing history, or device used. This has created suspicion that e-commerce algorithms exploit user behavior data to set prices dynamically, which was perceived as unfair and dishonest. Several users noted they would deliberately clear cookies, use incognito mode, or switch devices to "beat the system," suggesting that trust is being replaced by defensive digital habits (Hannák et al., 2014).

Participants also voiced skepticism regarding review authenticity and product quality assurance. Despite platforms providing rating systems and user reviews, many users suspect that fake reviews are widespread, particularly for high-margin products. This undermines their confidence in the platform's integrity. A few respondents even admitted to cross-checking reviews on external forums like Reddit or YouTube before making significant purchases—an implicit sign of trust displacement.

Trust varies across platforms. Respondents were more likely to trust niche or community-based platforms with transparent policies and responsive customer service,

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whereas large platforms like Shopee, Lazada, or Amazon were perceived as less trustworthy, despite their popularity. This paradox reflects the tension between convenience and credibility, where users feel forced to engage with platforms they don't fully trust due to lack of alternatives (McKnight et al., 2002).

The table below summarizes the major sources of user distrust and the proportion of participants who reported them:

Table 3. Distrust

Source of Distrust	Percentage of Participants (%)
Data Surveillance Concerns	70%
Algorithmic Price Discrimination	58%
Fake/Manipulated Reviews	63%
Intransparent Recommendation	49%

Source: Distrust

These findings highlight that the decline in user trust is not rooted in a single incident or flaw but stems from an accumulation of subtle yet persistent platform behaviors that prioritize algorithmic manipulation over ethical engagement. As users become more digitally literate, they grow more critical of how e-commerce operates, and this emerging distrust could have long-term implications for platform loyalty, brand integrity, and regulatory scrutiny.

4. Gendered and Age-Based Variations in Resistance Responses

This study also revealed notable variations in algorithmic resistance behavior when viewed through the lens of gender and age, underscoring the importance of demographic factors in understanding digital consumer behavior. Resistance to algorithmic personalization is not monolithic; instead, it is shaped by social identity, generational experience, and digital literacy levels. The findings demonstrate that men and women, as well as younger and older users, exhibit different attitudes and strategies in response to algorithmic targeting within e-commerce, social media, and content platforms.

Gender-based distinctions emerged clearly in both the qualitative interviews and quantitative survey data. Female participants tended to engage in resistance behaviors that were more emotionally-driven and privacy-focused. A significant proportion of women expressed concern about how their online behavior was being monitored, especially in

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relation to sensitive product categories such as beauty, health, and lifestyle. As a result, they were more likely to use privacy-enhancing tools (e.g., VPNs, cookie blockers, private browsing) and often refrained from clicking algorithmically recommended products (Lutz & Hoffmann, 2017). Their resistance was also tied to a perceived violation of their personal space and emotional well-being, as many felt uncomfortable with "too personalized" content that seemed to know them too well.

Male respondents tended to approach algorithmic personalization with a more rational and tactical mindset. Rather than avoiding recommendations altogether, many men manipulated the algorithm to their advantage—e.g., by repeatedly searching for discounted products or using fake profiles to test offers and price variations. This reflects a more utilitarian form of resistance that focuses on gaining leverage within the algorithmic system rather than outright rejection. This behavioral difference supports earlier findings that digital control is often exercised differently across gender lines (Blank, 2016).

In terms of age-based variation the younger demographic (18–29 years) displayed higher levels of awareness, experimentation, and resistance behaviors. Their digital fluency enabled them to recognize patterns of algorithmic manipulation and actively seek ways to subvert it. Strategies such as account hopping, misleading click trails, and content flagging were common among this group. One participant even likened resisting Instagram's feed to a "game of beating the algorithm," indicating a playful but critical engagement with the system. This group also reported higher levels of algorithm fatigue, where overexposure to recommended content led to disengagement or reduced app usage (DeVito et al., 2017).

Older users (30–50 years) by contrast, were less resistant and more likely to perceive personalization as a convenience rather than a threat. Their strategies leaned toward avoidance rather than resistance, such as limiting online purchases, unsubscribing from newsletters, or ignoring ads without taking technical steps to confuse algorithms. Interestingly, this group also showed greater reliance on human recommendations (from peers or family) than algorithmic suggestions, indicating a traditional trust pathway over digital curation.

The demographic breakdown of key resistance strategies is summarized in the table below:

Table 4. Gendered and Age-Based Variations in Resistance Responses

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Demographic Group	Dominant Resistance Strategy	Percentage Engaging in Behavior (%)
Women (All Ages)	Privacy Tools & Content Avoidance	61%
Men (All Ages)	Tactical Manipulation & Test Accounts	54%
Youth (18–29)	Algorithm Subversion & Experimenting	69%
Adults (30–50)	Passive Avoidance & Peer Trust	46%

These findings reinforce the view that resistance to personalization is deeply shaped by social and generational identities. As platforms continue to rely heavily on data-driven personalization, understanding these nuanced patterns is essential not onlyfor marketers and designers but also for policymakers concerned with digital equity, ethical tech design, and user empowerment.

Discussion : Digital Fatigue and Urban Consumers' Resistance Against E-Commerce Algorithms

Table 5. Analytical Application of Algorithmic Resistance Theory

Theoretical Dimension	Empirical Findings	Theoretical Interpretation
Resistance as Digital Agency	72% of respondents altered their usage behavior (logging out, uninstalling apps, clicking random products)	Consumers demonstrate digital agency rather than passivity; they renegotiate their digital interactions to regain autonomy over algorithmic influence
Resistance Motivated by Emotional Fatigue	Resistance is primarily driven by emotional exhaustion and irritation—not merely privacy concerns	Supports Velkova & Kaun's claim that resistance often stems from emotional discomfort caused by algorithmic saturation
Micro Acts as Macro Strategies	Acts such as browsing in incognito mode or engaging with unrelated content are used to confuse algorithms	Aligns with the theory that resistance is often embodied in small, everyday acts that cumulatively challenge dominant digital systems

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Resistance as Negotiated Engagement	Most participants do not fully abandon platforms but engage selectively and strategically	Indicates that resistance is not total rejection but a form of conscious negotiation within algorithmic systems
Resistance Shaped by Digital Literacy	Younger users (ages 21–30) employ technical resistance; older users prefer passive strategies like muting notifications or app uninstallation	Highlights that the mode of resistance is shaped by digital competence and familiarity with technology
Fatigue-Induced Resistance	84% of users report cognitive overload due to excessive personalization, notifications, and algorithmic content	Reflects Velkova & Kaun's idea of resistance emerging from saturation and cognitive fatigue, rather than failure of system functionality

The analytical application of Algorithmic Resistance Theory (Velkova & Kaun, 2021) in this study provides a compelling lens to understand how urban consumers respondto digital fatigue through subtle, everyday acts of defiance against algorithmic domination. The summarized data in the analytical table consisting of six core dimensions maps how user behaviors, such as logging out of apps, uninstalling platforms, or clicking unrelated products, reflect a growing sense of digital agency. For example, 72% of respondents reported altering their usage patterns to escape algorithmic control. This supports the theory's central claim that algorithmic resistance is not necessarily overt but occurs through micro-strategies embedded in daily digital routines.

While the data effectively illustrates that users actively engage in tactical maneuvers, it still leaves open critical questions about the depth of users' awareness and the sustainability of such resistance. Resistance, as captured here, appears emotionally driven— especially with 84% experiencing fatigue and decision overload—rather than rooted in a coherent or political critique of algorithmic capitalism. This emotional fatigue leading to resistance reinforces Velkova & Kaun's assertion that digital saturation creates not just annoyance, but a cognitive tipping point where users are compelled to push back. Yet, the reliance on a qualitative sample of only 25 participants limits the generalizability of the findings, and the percentage figures, though illustrative, should be interpreted with caution. Furthermore, the table indicates that digital literacy plays a major role in shaping resistance behavior. Younger users with higher

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tech proficiency resort to advanced techniques like algorithm manipulation, whereas older users adopt passive avoidance. This digital divide deserves deeper scrutiny, as it may mask structural inequalities in digital resilience and empowerment.

The classification of actions like "clicking unrelated content" as resistance may oversimplify complex user motivations that could also include boredom, curiosity, or impulsivity thus demanding a more layered interpretation. While the table is effective in operationalizing theory into observable patterns, it might benefit from integrating user quotations or contextual factors to humanize the data further. In summary, the table succeeds in aligning empirical findings with theoretical constructs, validating that algorithmic resistance exists in diverse, personalized forms. Critical approach is needed to interrogate the underlying motives, effectiveness, and implications of these acts, especially in the broader context of surveillance capitalism, platform power asymmetry, and digital wellbeing. Without such deeper inquiry, resistance risks being framed merely as temporary coping, rather than a transformative digital practice.

CONCLUSION

The findings of this study underscore the emergence of digital fatigue as a psychological and behavioral response among urban consumers overwhelmed by algorithm-driven e-commerce environments. With 84% of participants experiencing symptoms of cognitive overload, emotional exhaustion, and decision fatigue, it is evident that the personalization algorithms intended to enhance user experience are increasingly backfiring,especially in tech-saturated urban contexts. These symptoms of fatigue triggered a range of algorithmic resistance behaviors—subtle, conscious acts such as using incognito mode, logging out, uninstalling apps, and engaging in algorithm manipulation. Through the lens of Algorithmic Resistance Theory (Velkova & Kaun, 2021), such behaviors are framed not as passive avoidance but as manifestations of digital agency, whereby users actively renegotiate their interactions with opaque digital systems. Importantly, the study reveals that these resistance responses are shaped by demographic variables, particularly age and gender, as younger users tend to engage in technically savvy forms of resistance, while older users prefer withdrawal and avoidance. Emotional motivations—rather than privacy concerns—dominate the narrative, highlighting the critical role of psychological well-being in shaping digital behavior. Additionally, declining trust in e-commerce platforms due to perceived manipulation and lack of transparency further accelerates user disengagement. Taken together, the study concludes that urban consumers are not merely reacting to technological systems,

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but are actively reshaping their relationship with them. For designers, marketers, and policymakers, this implies an urgent need to redesign algorithmic engagement models that respect cognitive limits and user autonomy. Addressing digital fatigue is not only essential for maintaining consumer trust but also for sustaining meaningful and ethical digital ecosystems.

REFERENCES

Binns, R., Veale, M., Van Kleek, M., & Shadbolt, N. (2018). 'It's reducing a human being to a percentage': Perceptions of justice in algorithmic decisions. *CHI Conference on Human Factors in Computing Systems*, 1–14. https://doi.org/10.1145/3173574.3173951

Brunton, F., & Nissenbaum, H. (2015). *Obfuscation: A user's guide for privacy and protest*. MIT Press.

Creswell, J. W., & Poth, C. N. (2018). *Qualitative Inquiry and Research Design: Choosing Among Five Approaches* (4th ed.). Thousand Oaks, CA: Sage.

Eubanks, V. (2018). *Automating inequality: How high-tech tools profile, police, and punish the poor*. St. Martin's Press.

Hannák, A., Soeller, G., Lazer, D., Mislove, A., & Wilson, C. (2014). Measuring price discrimination and steering on e-commerce web sites. *Proceedings of the 2014 Conference on Internet Measurement Conference*, 305–318.

Irawan, A. W. (2024a). Strategies for Sharia Tourism Management: Realizing Sustainable Halal Tourism. *PAPUA: International Journal of Sharia …*. Retrieved from https://e-journal.iainfmpapua.ac.id/index.php/papua/article/view/1147

Irawan, A. W. (2024b). The Role Of Sharia Management In The Development Of Products And Services In Islamic Banking In Indonesia. *PAPUA: International Journal of Sharia …*. Retrieved from https://e-journal.iainfmpapua.ac.id/index.php/papua/article/view/1148

Irawan, A. W., & Wahyuni, W. (2022). Endorsement as a Marketing Media Trend: A Case Study on By_aibee. *Journal of Sharia Economics*. Retrieved from https://journal.uaindonesia.ac.id/index.php/JSE/article/view/304

Martin, K., & Murphy, P. (2017). The role of data privacy in marketing. *Journal of the Academy of Marketing Science*, 45(2), 135–155.

McKnight, D. H., Choudhury, V., & Kacmar, C. (2002). Developing and validating trust measures for e-commerce: An integrative typology. *Information Systems Research*, 13(3), 334–359.

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Noble, S. U. (2018). *Algorithms of oppression: How search engines reinforce racism*. NYU Press.

Pariser, E. (2011). *The filter bubble: What the internet is hiding from you*. Penguin Press.

Raji, I. D., Smart, A., White, R., Mitchell, M., Gebru, T., Hutchinson, B., Smith-Loud, J., Theron, D., & Barnes, P. (2020). Closing the AI accountability gap: Defining an end-to-end framework for internal algorithmic auditing. *Proceedings of the 2020 Conference on Fairness, Accountability, and Transparency*, 33–44. https://doi.org/10.1145/3351095.3372873

Scott, J. C. (1985). *Weapons of the weak: Everyday forms of peasant resistance*. Yale University Press.

Selye, H. (1956). *The Stress of Life*. New York: McGraw-Hill.

Silverman, D. (2021). *Interpreting Qualitative Data* (6th ed.). London: SAGE Publications.

Statista. (2023). *Urban consumer sentiment toward e-commerce recommendation systems in Southeast Asia*. Retrieved from https://www.statista.com

Velkova, J., & Kaun, A. (2021). Algorithmic resistance: Media practices and the politics of refusal. *Information, Communication & Society*, 24(4), 523–538.

Velkova, J., & Kaun, A. (2021). Algorithmic resistance: Media practices and the politics of refusal. *Information, Communication & Society*, 24(4), 523–538.

Wahyudhi, I., Irawan, A. W., & Khoir, M. (2024). IMBT (Ijarah Mumtahiya Bittamlik) as the main contract in mortgage (Home Ownership Credit). *Akademika*.

Weinstein, E., & Selman, R. (2022). Digital fatigue and algorithmic pressure: A psychological framework. *Journal of Media Psychology*, 34(2), 78–91.

Yeung, K. (2017). 'Hypernudge': Big data as a mode of regulation by design. *Information, Communication & Society*, *20*(1), 118–136. https://doi.org/10.1080/1369118X.2016.1186713

Zuboff, S. (2019). *The Age of Surveillance Capitalism: The Fight for a Human Future at the New Frontier of Power*. PublicAffairs.

Zuboff, S. (2019). *The age of surveillance capitalism: The fight for a human future at the new frontier of power*. PublicAffairs.

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