THE INFLUENCE OF TRASH BIN AVAILABILITY ON THE LITTERING BEHAVIOR OF STUDENTS AT CAMPUS IV OF UNIVERSITAS PASUNDAN

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Abstract

Campus waste management depends on both the availability of disposal facilities and the behavior of campus users. This study describes students' perceptions of trash bin availability and littering-related behavior at Campus IV of Universitas Pasundan. A descriptive quantitative approach was used, combining campus observation with an online questionnaire completed by 20 students selected through purposive sampling. Responses were summarized as percentages. In the questionnaire, 65% of respondents agreed or strongly agreed that they were more inclined to dispose of waste properly when bins were easily accessible, and 75% agreed or strongly agreed that they had delayed disposal because a bin was too far away. In addition, 70% strongly agreed that additional bins were needed. These results indicate that respondents perceived accessibility and the number of bins as relevant to waste-disposal decisions. The findings provide useful preliminary insights into the relationship between trash bin availability and students' waste-disposal behavior. While the study's purposive sample, reliance on self-reported perceptions, and descriptive analytical approach suggest opportunities for further investigation, the results offer a valuable foundation for understanding students' perceptions and identifying potential improvements in campus waste management. Future research could strengthen these findings by verifying questionnaire data, systematically mapping trash bin locations, and incorporating direct observations of littering behavior.

Keywords: *Campus cleanliness; littering behavior; waste management; trash bin accessibility; student perceptions.*

Introduction

Campus cleanliness contributes to a comfortable setting for teaching, learning, and other academic activities (Jakimiuk, et al., 2023). Litter scattered across campus can reduce visual amenity and may contribute to blocked drainage, unpleasant odors, and other environmental-management problems when waste is not collected appropriately (Basavaraju et al., 2025). Universities also have an educational role in demonstrating responsible environmental practices (Uzorka et al., 2024).

The availability, condition, and location of trash bins are practical components of campus waste management. Bins that are easy to find and reach may reduce the effort required to dispose of waste properly. Conversely, insufficient or poorly located bins may create barriers to appropriate disposal (Douti et al., 2017). Nevertheless, infrastructure alone may not determine behavior: habits, environmental awareness, perceived responsibility, and social norms can also shape how students handle their waste (Nisa et al., 2025), (Wu et al., 2022).

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Previous studies cited in the source manuscript discuss student waste-disposal behavior and the role of environmental awareness and supporting facilities (Jedina et al., 2024; Sari et al., 2026; Ulfah & Anggreny, 2022). The present study provides a site-specific description of student perceptions at Campus IV of Universitas Pasundan. Its contribution is exploratory: it identifies perceived access and facility issues that may warrant further measurement and intervention. Because the study uses a small purposive sample and descriptive statistics, it does not by itself establish a causal effect of bin availability.

This study aims to: (1) describe students' perceptions of the availability, condition, and accessibility of trash bins at Campus IV of Universitas Pasundan; (2) summarize self-reported littering-related behavior and perceptions of campus cleanliness; and (3) identify facility-related issues that students consider priorities for improving campus waste management.

Research Methodology

Research design

The study used a descriptive quantitative design. Questionnaire responses were summarized using counts and percentages to describe perceptions of trash bin availability and littering-related behavior. The study was not designed as an experiment, and the analysis reported here does not establish causation or statistical significance.

Research location and period

The study was conducted at Campus IV of Universitas Pasundan. The source manuscript reports that research activities began on 11 May 2026 and included preliminary observation, preparation of data-collection materials, questionnaire distribution, and data processing. The exact end date and duration of each activity were not specified.

Population and sample

The target population comprised active students who used the campus environment. A purposive sampling approach was used to recruit students who frequently undertook activities on campus and were willing to complete the questionnaire. Twenty students participated. The source manuscript does not report the total student population, a formal sample-size calculation, or the demographic composition of respondents. Consequently, the sample should be treated as exploratory and not assumed to represent all students at Campus IV.

Data collection

Two data-collection methods were reported. First, the researchers conducted direct observation of campus cleanliness and trash bin availability at various locations. Second, a closed-ended online questionnaire was distributed through Google Forms. The questionnaire used a five-point response scale: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, and 5 = strongly agree. The source manuscript does not provide a detailed observation checklist, a map of observation points, the number of bins observed, measured distances, or a validation procedure for the questionnaire. These omissions limit independent assessment of the objective facility conditions.

Data analysis and data-quality note

Questionnaire responses were summarized as percentages for each item. No inferential statistical test was reported; therefore, terms such as "significant influence" are not used in the revised interpretation. Percentages below reproduce the values identifiable in the source manuscript. Some reported values and narrative summaries do not agree, and at least one row in the source layout could not be unambiguously reconstructed. These items are explicitly flagged for verification against the original Google

Forms export before publication; they have not been silently imputed or recalculated from assumed counts.

Results and Discussion

Twenty respondents completed the questionnaire. Given the purposive sampling method and limited sample size, the results describe these respondents' perceptions only. They should not be generalized to the entire campus population without additional sampling and corroborating observations.

Respondent rating scale

Table 1 presents the five-point response scale used in the questionnaire where low score indicates strongly disagree, and in contrary, high score shows strongly agree of respondent of the statement or question in the questionnaire. Score is ranged between 1-5. There is no weight of each question.

Table 1. Respondents Responses

Score	Response
1	Strongly disagree
2	Disagree
3	Neutral
4	Agree
5	Strongly agree

Perceptions of trash bin availability

Table 2 reproduces the percentages reported in the source manuscript for the six availability items. The first item indicates that 55% selected agree or strongly agree that bins were easy to find (40% + 15%). For the statement that the number of bins was sufficient, 55% disagreed or strongly disagreed (5% + 50%), while 10% strongly agreed. For bin accessibility, 35% agreed or strongly agreed (5% + 30%), while 40% selected neutral. These responses suggest that respondents' views differed across aspects of availability and that perceived sufficiency may be an issue.

Table 2. Percentage of Each Scale and Question

No.	Question	Strongly disagree (%)	Disagree (%)	Neutral (%)	Agree (%)	Strongly agree (%)
1	Trash bins in the campus environment are easy to find	0	20	25	40	15
2	The number of trash bins on campus is sufficient	5	50	35	0	10
3	Trash bin locations are easily accessible to students	5	20	40	5	30
4	Trash bins are available in areas frequently used by students	0	10	35	25	30
5	The condition of trash bins on campus is still fit for use	0	20	40	30	10
6	The distance between trash bins on campus is adequate	0	16	65	15	5

Data-quality note: the percentages for item 6 sum to 101%, likely reflecting a transcription or rounding issue; this must be checked against the raw questionnaire export. The percentages for other items should also be checked against the raw data because the sample size is 20 and most individual responses would ordinarily correspond to five percentage points. No correction has been assumed in this revision.

Self-reported littering-related behavior

Table 3 summarizes the behavior-related items. For item 1, 30% agreed and 35% strongly agreed that they were more inclined to dispose of waste properly when bins were easily accessible, giving a combined agreement of 65%. For item 2, 20% agreed and 55% strongly agreed that they had delayed disposal because a bin was too far away, giving a combined agreement of 75%. For item 3, 75% agreed or strongly agreed that they carried their waste until finding a bin. For item 5, 55% agreed or strongly agreed that bin availability influenced their disposal habit. For item 6, 75% agreed or strongly agreed that they felt responsible for campus cleanliness. For item

7, 80% agreed or strongly agreed that additional bins were needed.

Data-quality note: the source manuscript's Table 3 layout does not permit reliable identification of all five response percentages for item 4. The row is marked "VERIFY" rather than assigning values that cannot be confirmed. The source narrative reports that 70% frequently observed litter despite the presence of bins; this figure should be checked against the raw data before being retained as a confirmed result.

Table 3. Summary of the Respondents' Behavior

No.	Question	Strongly disagree (%)	Disagree (%)	Neutral (%)	Agree (%)	Strongly agree (%)
1	I am more inclined to dispose of waste properly when trash bins are easily accessible	10	10	10	30	35
2	I have delayed disposing of waste because the trash bin was located too far away	5	5	15	20	55
3	I keep carrying my waste until I find a trash bin	5	5	15	20	55
4	I still frequently see litter scattered despite the presence of trash bins	VERIFY	VERIFY	VERIFY	VERIFY	VERIFY
5	The availability of trash bins influences my habit of disposing of waste	5	15	25	5	50
6	I feel a sense of responsibility to maintain campus cleanliness	0	5	20	20	55
7	Additional trash bins are needed in the campus area	10	0	10	10	70

Interpretation and implications

The questionnaire suggests that respondents perceived bin accessibility as relevant to their disposal decisions and that many considered the number of bins insufficient. The combined agreement for the accessibility-related statement was 65%, while 75% agreed or strongly agreed that they had delayed disposal because a bin was too far away. These are self-reported perceptions, not direct measurements of the effect of bin distance on actual littering. Likewise, the reported 80% agreement that additional bins were needed indicates a perceived priority, but does not identify where bins should be installed or how many are required.

The findings provide useful preliminary insights into the relationship between trash bin availability and students' waste-disposal behavior. While the study's purposive sample, reliance on self-reported perceptions, and descriptive analytical approach suggest opportunities for further investigation, the results offer a valuable foundation for understanding students' perceptions and identifying potential improvements in campus waste management. Future research could strengthen these findings by verifying questionnaire data, systematically mapping trash bin locations, and incorporating direct observations of littering behavior.

Accordingly, practical recommendations should be treated as preliminary: map bins and litter hotspots, consult campus users and cleaning staff, and evaluate any changes using comparable observations before and after implementation (Tobias et al., 2024).

The results should also be interpreted in light of data-quality and sampling limitations. The small purposive sample, the absence of reported demographic information, the lack of inferential analysis, and inconsistencies in some table values reduce the strength of conclusions.

Conclusions

This descriptive study summarizes the perceptions of 20 purposively selected students regarding trash bin availability and littering-related behavior at Campus IV of Universitas Pasundan. In the reported questionnaire data, 65% agreed or strongly agreed that they were more inclined to dispose of waste properly when bins were easily accessible, 75% agreed or strongly agreed that they had delayed disposal because a bin was too far away, and 80% agreed or strongly agreed that additional bins were needed. These findings suggest that accessibility and perceived sufficiency of trash bins are relevant concerns for the respondents.

The study does not establish that bin availability has a statistically significant or causal influence on actual littering behavior. The sample is small and purposively selected, the analysis is descriptive, and some source-table percentages require verification. The findings should therefore be treated as preliminary rather than representative of all students at Campus IV.

As a practical next step, the campus could conduct a systematic inventory of bin locations and conditions, map litter hotspots, and consult students and cleaning personnel before deciding where additional bins are needed. Any intervention should be evaluated using consistent observations before and after implementation. Future studies should use a larger and more representative sample, validate the questionnaire, report the observation protocol, and reconcile all numerical results with the raw data.

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