

Developing and Using the Academic Dishonesty Awareness Questionnaire (ADAQ-35)

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Abstract

Academic honesty is the ethical foundation of academia, requiring students to uphold integrity in their academic practices. However, many students violate these principles, often due to a lack of understanding of academic dishonesty. Regardless of the reasons, maintaining academic integrity is essential, and any breach is unacceptable. However, there is limited research on undergraduate students' awareness of academic dishonesty in the context of Shaheed Benazirabad, and a comprehensive, validated instrument to measure this awareness was lacking. This study aimed to address this gap by developing and utilizing the Academic Dishonesty Awareness Questionnaire (ADAQ-35) to assess undergraduate students' awareness of academic dishonesty. Awareness was examined across seven sub-areas: Fabrication, Falsification, Academic Sabotage, Disruptive Conduct, Deception, Collusion, and Plagiarism. A descriptive, cross-sectional survey was conducted using a quantitative approach. The sample included 263 final-year undergraduates (SBBU: 228, SBBUVAS: 35), selected through proportionate stratified sampling. Data were collected via the self-developed Academic Dishonesty Awareness Questionnaire (ADAQ-35) and analyzed using SPSS to calculate percentages, frequencies, and applying t-tests. Findings revealed that ADAQ-35 is a valid and reliable instrument to measure awareness about Academic Dishonesty and overall awareness of respondents about academic dishonesty was 25.37%. Independent t-tests showed no significant differences in awareness based on university or gender. Based on these findings, researchers should use ADAQ-35 to measure awareness about Academic Dishonesty and universities should establish academic integrity centers to enhance students' understanding of academic honesty.

Keywords: Academic Dishonesty Awareness Questionnaire (ADAQ-35) Awareness, Undergraduates, Academic Dishonesty

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Introduction

Academic honesty is an asset promoted by all educational institutions, teachers, administrations and students worldwide (Katoch, 2013). Higher education institutions have been concerned with teaching professional and academic ethics apart from teaching and learning to future graduates for many decades; higher education institutions should be the places for introducing ethical values to the students (UNESCO, 2004); and they deem themselves to be more than degree granters and express an institutional obligation to generating ethical and equipped citizens (Chan, 2016). Moreover, "Higher education institutions are established to create new ideas and formulate new theories, formulas, and standards with the help of experiments, fieldwork and through other research methods. The second important purpose of such organizations is to produce highly skilled and competent graduates with high standards of honesty and professional ethics to serve the community" (Soroya, Hashmi and Soroya, 2016, p.423). Academic honesty is part of many fundamental values of higher education (Schmelkin, Gilbert, Spencer, Pincus and Silva, 2008), and many higher education institutions in Pakistan deem academic honesty as the foundation as well as the building block of their institutions. Higher education students, termed digital natives, have been nurtured in an era of societal apprehensions about honesty (Hendershott, Drinan & Cross, 2000). These students constantly come across corruption and Academic Dishonesty, especially in the form of cheating, in all aspects of their academic and social lives (Williams, 2017). This is sometimes prevalent because of unawareness about different aspects of Academic Dishonesty and the absence of institutional codes of ethics. In Pakistan, Many higher education institutions even don not have their codes of ethics to acquaint their students with what constitutes Academic Dishonesty. Dishonest behaviours can be improved by developing innovative practices and interventions; such developments require the understanding of factors responsible for improving Academic Dishonesty (Maloshonok, & Shmeleva, 2019). Although, Higher Education Commission (HEC), which is the supervisory body for higher education institutions, had developed an anti-plagiarism policy but the undergraduate students of higher education are not aware of such policies (Murtaza, Zafar, Bashir, & Hussain, 2013). This results in their involvement in academic corrupt practices both knowingly and unknowingly.

While existing literature highlights the prevalence of academic dishonesty and explores various contributing factors (Katoch, 2013; Hendershott, Drinan & Cross, 2000), a critical gap exists in the comprehensive measurement of student awareness of the multifaceted dimensions of academic dishonesty. Many instruments primarily focus on detecting incidents of academic misconduct or assessing student attitudes and perceptions towards academic integrity (Schmelkin, Gilbert, Spencer, Pincus and Silva, 2008; Murtaza, Zafar, Bashir, & Hussain, 2013). However, a valid and reliable tool specifically designed to quantify undergraduate students' understanding of the nuances within academic dishonesty, such as fabrication, falsification, collusion, plagiarism, deception, disruptive conduct, and academic sabotage, was lacking, particularly within the specific context of undergraduate students in Shaheed Benazir Bhutto University (SBBU) and Shaheed Benazir Bhutto University of Veterinary & Animal Sciences (SBBUVAS) in Shaheed Benazirabad, Sindh, Pakistan. This absence poses a significant challenge because a lack of awareness is often a precursor to unintentional engagement in dishonest behaviors (Hendershott, Drinan & Cross, 2000).

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Simply put, students cannot be expected to uphold academic integrity if they do not fully understand what constitutes a violation of it. Furthermore, research indicates that most of the students in Pakistan are unaware of plagiarism (Malik, Mahroof, & Ashraf, 2021). Therefore, the development of a tool like the Academic Dishonesty Awareness Questionnaire (ADAQ-35) became crucial. By providing a means to assess awareness across these distinct dimensions, the ADAQ-35 offers a valuable instrument for institutions like SBBU and SBBUVAS to identify specific areas where students require more education and intervention, ultimately fostering a stronger culture of academic integrity. Furthermore, understanding the level of awareness can inform the design of targeted educational programs and policies that effectively address knowledge gaps and promote ethical academic conduct. This study, therefore, seeks to address this critical gap by developing and utilizing the ADAQ-35 to assess the awareness level of undergraduate students in SBBU and SBBUVAS regarding the seven dimensions of academic dishonesty.

This research ascertained the awareness level of undergraduates about Academic Dishonesty around its seven domains: Fabrication; Falsification; Academic Sabotage; Disruptive Conduct; Deception; Collusion; and Plagiarism.

Objectives of the Study

1. To develop Academic Dishonesty Awareness Questionnaire (ADAQ-35)
2. To ascertain the awareness level of undergraduates about Academic Dishonesty using ADAQ-35
3. To ascertain the difference in awareness level of undergraduates about Academic Dishonesty according to institute
4. To ascertain the difference in awareness level of undergraduates about Academic Dishonesty according to gender

Research Questions

1. What is the awareness level of undergraduates about Fabrication?
2. Does the awareness level of undergraduates about Fabrication differ according to Institute?
3. Does the awareness level of undergraduates about Fabrication differ according to Gender?
4. What is the awareness level of undergraduates about Falsification?
5. Does the awareness level of undergraduates about Falsification differ according to Institute?
6. Does the awareness level of undergraduates about Falsification differ according to Gender?
7. What is the extent of awareness of undergraduates about Academic Sabotage?
8. Does the awareness level of undergraduates about Academic Sabotage differ according to Institute?
9. Does the awareness level of undergraduates about Academic Sabotage differ according to Gender?
10. What is the extent of awareness of undergraduates about Disruptive Conduct?
11. Does the awareness level of undergraduates about Disruptive Conduct differ

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according to Institute?

12. Does the awareness level of undergraduates about Disruptive Conduct differ according to Gender?

13. What is the awareness level of undergraduates about Deception?

14. Does the awareness level of undergraduates about Deception differ according to Institute?

15. Does the awareness level of undergraduates about Deception differ according to Gender?

16. What is the awareness level of undergraduates about Collusion?

17. Does the awareness level of undergraduates about Collusion differ according to Institute?

18. Does the awareness level of undergraduates about Collusion differ according to Gender?

19. How much do undergraduates know about Plagiarism?

20. Does the awareness level of undergraduates about Plagiarism differ according to Institute?

21. Does the awareness level of undergraduates about Plagiarism differ according to Gender?

Scope of the Study

Academic Dishonesty is a broad area so this research explored it only in terms of awareness of Plagiarism, Fabrication, Falsification, Disruptive Conduct, Academic Sabotage, Deception, and Collusion.

Definitions of Key Terms

Awareness

Awareness is a measure of how well-known Academic Dishonesty is regarding Fabrication, Falsification, Academic Sabotage, Disruptive Conduct, Deception, Collusion Plagiarism, and HEC Plagiarism policy. An awareness level from 0%-20% was considered very low; an awareness level from 21%-40% was deemed low; an awareness level from 41%-60% was estimated to be medium; an awareness level from 61%-80% was judged high, and an awareness level from 81%-100% was supposed very high.

Academic Dishonesty

Academic Dishonesty is the moral code of academia that requires the academic community to be honest both in their behaviours and practices by not involving in:

Plagiarism

Taking and using another person's thoughts, writings, and inventions as one's own is plagiarism

Fabrication

Fabrication is defined as the unauthorized creation or invention of information in an academic document or activity.

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Falsification

It is changing or altering the information to obtain desired results.

Disruptive Conduct

Any conduct that interferes with the teaching/learning process is disruptive.

Academic Sabotage

Academic Sabotage is defined as failure to contribute as required to a team project and acting to prevent others from completing their task successfully on time.

Deception

A deception is an act or omission that is intended to deceive an instructor regarding formal academic exercise.

Collusion

Collusion is the act of two or more students who work on an individual task or take unauthorized help to complete individual tasks.

Limitations

Like all the research, this research also had some limitations. As data were collected through a structured closed-ended questionnaire with pre-conceived categories so the responses lacked flexibility, depth and represented an overly simple view of awareness. The responses should be interpreted around the parameters developed for the themes. The findings were also generalizable only to the undergraduates of Shaheed Benazir Bhutto University and the Shaheed Benazir Bhutto University of Veterinary and Animal Sciences and the focus was limited only to the responses of the respondents.

Literature Review

Academic Dishonesty Research in Pakistan

Reviewed literature suggests that very little research had been conducted in Pakistan where approximately 124 recognized campuses of higher education institutions are working. Most of the studies were conducted in institutions in urban centers that are deemed to be academically advanced in terms of the quality of education provided there. Available literature also suggests that no research had been reported about students of interior Sindh. Further research conducted also suffers from serious methodological faults and limitations in terms of sample size and generalizability. Most of the research conducted in Pakistan focused on plagiarism and cheating violations of academic honesty and ignored other breaches of academic honesty. Further, previous research did not explore the different types of plagiarism. To conclude, Academic Dishonesty was studied as an umbrella term in Pakistan. Mostly focused areas were awareness, prevalence, and causes of cheating and plagiarism (Hafeez, Khan, Jawaid, and Haroon, 2013; Ahmed, Ahmad, Merchant, and Nazir, 2017; Shoaib and Ali 2020; Shirazi, Jafarey & Moazam, 2010; Rehman and Waheed 2013; Sarwar, Moin & Jabeen, 2016; Moin, Dahar and Yousuf, 2020; Ahmad, Islam and Amin, 2020;

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Mansoor & Ameen, 2016; Afridi, Khan, Khan, Khan, Bibi, and Khan, 2019; Nazir, 2010; Aslam, Mahboob and Zahra, 2019; Ramzan, Munir, Siddique and Asif, 2011; Quraishi and Aziz, 2017; Javaeed, Khan, Khan, and Ghauri, 2019; Shukr, Choudry, and Safdar, 2017), but did not investigate other more serious forms of Academic Dishonesty. Literature review suggests that the most frequent form of Academic Dishonesty is plagiarism (Gomez, Nagesh, & Sujatha, 2014)), and it is also a major breach of ethics but fabrication and falsification are more serious forms of Academic Dishonesty (Deshmukh, Dodamani, Khairnar, & Naik, 2017). This is because Fabrication and Falsification negatively affect the sanctity, robustness, and applicability of scientific data and have knock-on effects on each subsequent study.

Academic Honesty and the Crucial Role of Awareness

Academic Honesty is a cornerstone of higher education, fostering a culture of trust, intellectual honesty, and ethical scholarship (Katoch, 2013). Educational institutions worldwide emphasize the importance of upholding these principles, recognizing that they are essential for the creation and dissemination of knowledge (UNESCO, 2004). However, the prevalence of academic dishonesty, encompassing behaviors such as plagiarism, fabrication, collusion, and cheating, poses a significant challenge to maintaining academic integrity (Hendershott, Drinan & Cross, 2000). These behaviors not only undermine the fairness of academic assessment but also erode the credibility of educational institutions and the value of scholarly work (Schmelkin, Gilbert, Spencer, Pincus and Silva, 2008). While various factors contribute to academic dishonesty, a critical element is the level of awareness students possess regarding what constitutes academic misconduct and the consequences of engaging in such behaviors (Hendershott, Drinan & Cross, 2000). In this context, awareness encompasses several key dimensions: knowledge of institutional policies and guidelines related to academic integrity, a clear understanding of the specific behaviors that constitute academic dishonesty, the ability to recognize instances of academic misconduct, and an appreciation for the ethical and practical consequences of engaging in dishonest practices (Schmelkin, Gilbert, Spencer, Pincus and Silva, 2008). A lack of awareness can lead to unintentional acts of academic dishonesty, highlighting the need for effective strategies to promote understanding and ethical conduct among students (Hendershott, Drinan & Cross, 2000).

Dimensions of Academic Dishonesty: A Closer Look

Academic dishonesty manifests in various forms, each with its own distinct characteristics and underlying motivations. This study focuses on seven key dimensions: Fabrication, Falsification, Academic Sabotage, Disruptive Conduct, Deception, Collusion, and Plagiarism.

Fabrication: Fabrication involves the invention or falsification of data, information, or sources in academic work (Soroya, Hashmi, and Soroya, 2016). This can include creating nonexistent research results, citing sources that were never consulted, or inventing data for assignments. Students may engage in fabrication due to pressure to achieve high grades, a lack of time or resources to conduct legitimate research, or a desire to present a more favorable image of their work.

Falsification: Falsification refers to the manipulation or alteration of existing data, materials, or processes to misrepresent findings or achieve desired outcomes (Chan, 2016). This can

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include altering research data to support a hypothesis, changing grades or records, or misrepresenting experimental procedures. Similar to fabrication, falsification may be driven by a desire for academic success, a fear of negative results, or a lack of understanding of ethical research practices.

Academic Sabotage: Academic sabotage encompasses actions intended to undermine the academic success of others. This can include destroying or hiding another student's work, disrupting their study efforts, or spreading false information about their academic performance. Academic sabotage may be motivated by competition, jealousy, or a desire to gain an unfair advantage.

Disruptive Conduct: Disruptive conduct refers to behaviors that interfere with the learning environment or the ability of others to engage in academic activities. This can include talking excessively during lectures, using electronic devices inappropriately, or engaging in disrespectful or harassing behavior. Disruptive conduct may stem from a lack of respect for instructors or classmates, a desire for attention, or an inability to control impulses.

Deception: Deception involves intentionally misleading or misrepresenting oneself or one's work in an academic context. This can include lying about attendance, fabricating excuses for missed assignments, or submitting work that was not completed by the student. Deception may be used to avoid consequences, gain unfair advantages, or protect one's reputation.

Collusion: Collusion refers to unauthorized collaboration on assignments or examinations that are intended to be completed individually. This can include sharing answers during exams, working together on individual assignments without permission, or submitting work that is substantially similar to that of another student. Collusion may be driven by a desire to help friends, a lack of confidence in one's own abilities, or a misunderstanding of the boundaries of acceptable collaboration.

Plagiarism: Plagiarism, defined as presenting someone else's work or ideas as one's own without proper attribution (Katoch, 2013), is a pervasive form of academic dishonesty in higher education. It can manifest in various ways, including direct copying, paraphrasing without citation, and submitting work purchased from online sources. Factors contributing to plagiarism include a lack of understanding of citation conventions, time constraints, and the ease of accessing information online (Hendershott, Drinan & Cross, 2000).

Factors Influencing Awareness of Academic Dishonesty

Several factors may influence a student's awareness of academic dishonesty. This study focuses on the potential roles of institute type and gender.

Institute Type: The type of institution a student attends may influence their awareness of academic dishonesty due to differences in academic culture, resources, and emphasis on ethical conduct. For example, universities with strong honor codes and a greater emphasis on research ethics may foster higher levels of awareness among their students.

Gender: Research on gender differences in academic dishonesty has yielded mixed results. These differences may be related to variations in risk-taking behavior, attitudes towards competition, or perceptions of fairness.

Limitations of Existing Instruments for Measuring Awareness

While various instruments exist for assessing academic dishonesty (Schmelkin, Gilbert,

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Spencer, Pincus and Silva, 2008), many of these tools have limitations in their ability to comprehensively measure student awareness of the multifaceted dimensions of academic misconduct. Some instruments focus primarily on detecting instances of academic dishonesty or assessing student attitudes towards cheating, while others lack the specificity needed to identify areas where students require targeted education and intervention. Furthermore, few instruments provide a comprehensive assessment of awareness across all seven dimensions examined in this study, limiting their ability to provide a holistic understanding of student knowledge and understanding of academic integrity. As Murtaza, Zafar, Bashir, & Hussain (2013) highlighted, undergraduate students are often unaware of existing policies related to academic integrity.

The Need for the ADAQ-35: Addressing the Gaps in Measurement

In light of the limitations of existing instruments, there is a clear need for a comprehensive and context-specific tool to assess undergraduate students' awareness of the diverse dimensions of academic dishonesty. To address this gap, the present study developed and validated the Academic Dishonesty Awareness Questionnaire (ADAQ-35). This instrument is specifically designed to measure awareness across all seven dimensions relevant to this study, providing a valuable tool for assessing awareness levels among undergraduate students at SBBU and SBBUVAS. The ADAQ-35 aims to enable institutions to identify specific areas where targeted education and intervention are needed to foster a stronger culture of academic integrity. The development of ADAQ-35 became more crucial due to lack of students' know-how about plagiarism as most of the students are unaware of it (Malik, Mahroof, & Ashraf, 2021)

While existing research has explored various facets of academic misconduct, a gap remains in the direct measurement of awareness across all seven dimensions relevant to this study. The ADAQ-35 represents a valuable contribution to the field by providing a comprehensive and context-specific tool for assessing awareness levels among undergraduate students. This study aims to contribute to a better understanding of student awareness of academic dishonesty and to inform the development of effective strategies to promote academic integrity in higher education.

RESEARCH METHODOLOGY

Philosophical Stance

Because the researcher took a scientific perspective for objective analysis of social behaviour of academic honesty and based his research on deductive theorizing with empirical verification of the propositions generated about awareness of academic honesty, therefore, this research is based on Positivist Philosophy.

Research Design

This study was descriptive by purpose, quantitative by method, and a cross-sectional survey was conducted.

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Population

The target population of this study was 451 male and female last semester undergraduates of Shaheed Benazir Bhutto University, Shaheed Benazirabad (SBBU) and Shaheed Benazir Bhutto University of Veterinary and Animal Sciences Sakrand (SBBUVAS).

S

ample and Sampling

As a sample of this study, the final year undergraduate students of two institutions (Shaheed Benazir Bhutto University and the Shaheed Benazir Bhutto University of Veterinary and Animal Sciences) were selected through proportionate stratified sampling. The researcher adopted proportionate stratified sampling because he did not want to leave everything to chance and wanted to guarantee a proportionate representation of both the universities in the sample. Krejcie and Morgan's (1970) formula was used to determine the sample size of the respondents. The recommended sample size according to Krejcie and Morgan formula was 210 but the researcher sampled 263 (25%) more than the above-recommended sample size to deal with the problem of non-response bias and rejection of suspicious forms as data was collected online through Google Form through Form Presenter Software. 25 % oversampling was done because a literature review suggests that non-response rates in surveys conducted in academic organizations range from 25% to 33% (Newman, 1994). Because the researcher was directly in contact with the respondents so he chose the lower limit of non-response (25%) to oversample.

Table 3.1 Population and Sample for the Study

S.No.	Name of University	Target Population	Sample
1	Shaheed Benazir Bhutto University	391	228
2	Shaheed Benazir Bhutto University of Veterinary and Animal Sciences	60	35
Total		451	263

Research Instrument

In this study the self-developed Academic Dishonesty Awareness Questionnaire (ADAQ-35) was used to collect the data.

Data Collection

The researcher collected the data through Google Forms due to the COVID-19 pandemic. However, the research took every possible step to ensure that the participants responded as honestly as possible and no unfair means were used in filling the survey questionnaire as it consisted of multiple-choice items. To ensure this, Form Presenter software was used. The Form Presenter is an add-on to Google G Suite that allows Google Forms to be displayed in various configurations and online exams to be taken quickly and easily from the respondents. It allows the researchers to control the time of the test, activities of the respondents while taking the test, types of audiences that can take the test, and presentations of the Google Form to the respondents. Through Form Presenter, the survey questionnaire was restricted to only one response from one respondent, and a maximum of two attempts were allowed to take

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this test. Two attempts were allowed because of connectivity issues and respondents were directed to fill this survey in one go and at the time when they had full internet speed. The time allowed to complete this survey was 95 minutes (three minutes for demographic information and two minutes per item). After clicking the start command, the link would have indicated "timed-out" options if the respondent had consumed more than the allowed time (95 minutes). The survey was set to open in full-screen mode and switching off this full-screen mode and between different tabs was tracked by the Form Presenter. Too many switchings between the tabs, timed-out, and exiting the full-screen mode were deemed suspicious activities and eight (8) such responses (three timed-out and five exiting the full-screen) were discarded from the final analysis.

Data Analysis

The quantitative data were analyzed through SPSS descriptive statistics to calculate frequencies and percentages. To determine the differences in awareness levels, independent sample t-tests were performed. Finally, the results were synthesized.

RESULTS

Section One: Analysis of Demographic Data

Table: Analyses of Demographic Data

Name of University	Program		Gender	
	Name	No. of respondents	Male	Female
SBBU	BBA	33(18.03%)	31(93.94%)	2(6.06%)
	BS/M.Sc. (Chemistry)	26(14.21%)	14(53.85%)	12(46.15%)
	B.Ed. (Hons)	24(13.11%)	19(79.17%)	5(20.83%)
	BS/MA (English)	46(25.14%)	30(65.22%)	16(34.78%)
	BS (IT)	48(26.23%)	36(75%)	12(25%)
SBBUVAS	BS (Media Studies)	6(3.28)	5(83.33%)	1(16.67%)

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	Total	183(85.12%)	135(73.77%)	48(26.23%)
	DVM	32(14.88%)	30(93.75%)	2(6.25%)
Grand Total		215 (100%)	165(76.74%)	50(23.26%)

Analysis: To deal with non-response bias, the researcher sampled (263) 25% over the recommended sample size (210). The filled forms received were 223 and the response rate for this survey was 84.79%. As too many switching between the tabs, timed-out, and exiting the full-screen mode were deemed suspicious activities so eight (8) such responses (three timed-out and five exiting the full-screen) were discarded from the final analysis.

According to the final analysis of data presented in table 4.1, the total number of respondents was 215 and out of them, 165(76.74%) were male and 50(23.26%) were female. Respondents of SBBU were 183 (85.12 %) and respondents of SBBUVAS were 32 (14.88 %). Male respondents of SBBU were 135(73.77%) while female respondents were 48(26.23%). Male respondents of SBBUVAS were 30(93.75%) while female respondents were 2(6.25%). Respondents of SBBUSBA belonged to six undergraduate programs BBA, Chemistry, Education, English, I.T., and Media Studies. Respondents of BBA included a total of 33(18.03%) and out of them, 31(93.94%) were male and 2(6.06%) were female. Respondents of Chemistry included a total of 26(14.21%) and out of them, 14(53.85%) were male and 12(46.15%) were female. Respondents of Education included a total of 24(13.11%) and out of them, 19(79.17%) were male and 5(20.83%) were female. Respondents of English included a total of 46(25.14%) and out of them, 30(65.22%) were male and 16(34.78%) were female. Respondents of I.T. included a total of 48(26.23%) and out of them, 36(75%) were male and 12(25%) were female. Respondents of Media Studies included a total of 6(3.28%) and out of them, 5(83.33%) were male and 1(16.67%) were female.

Section Two: Objective Wise Analysis

The following section gives an analysis of objectives that were achieved through this study.

Analysis of Objective No. 01: To develop Academic Dishonesty Awareness Questionnaire (ADAQ-35)

Research Instrument

Academic Dishonesty Awareness Questionnaire (ADAQ--35) containing a single modality of items in the form of multiple-choice questions was developed through literature review, visiting and reviewing introductory websites of international renowned universities wherein they defined different forms of academic dishonesty and in consultation with experts and research supervisor by following some predefined parameters. Each correct response was awarded a "1" point and each incorrect response was awarded a "0" point. Awareness about Plagiarism was measured through eleven multiple-choice items while the awareness of the other six domains of Academic Dishonesty (Fabrication, Falsification, Disruptive conduct, Academic Sabotage, Deception, and Collusion) was measured using twenty-four multiple-choice items (four each).

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Pilot Study

The instrument was pilot tested on ten per cent of the sample and the changes recommended by the respondents were incorporated into the final instrument after getting reviewed by the research supervisor. The refined tool resulted in the collection of more consistent results of the themes of research. Two items under the dimension plagiarism and one each under the dimension HEC plagiarism policy and collusion were deleted from the questionnaire. The stem of the eight items with two each from Falsification, Fabrication, Deception, and Academic Sabotage was rephrased. Response options of the 5 items were rephrased. These items were one each from plagiarism and collusion and two from disruptive conduct.

Validity and Reliability of Research Instrument

The researcher safeguarded that instrument was both valid and reliable. The first step in evaluating whether the measure is valid or not is to measure the content validity and this is the subjective form of validity, therefore, relies on expert opinions (Almanasreh, Moles, & Chen, 2019). Therefore, content validity was ensured through the expert opinions of two experts. Content Validity Index (CVI) was calculated that turned out to be 0.85. According to Davis (1992), the cut-off value of CVI with two experts should be at least 0.80. This indicates that the instrument was valid. Reliability was measured for each construct item and constructs were created from the survey items and the reliability of each construct was measured through the KR-20 formula as binary response items were involved in the collection of data. Dichotomous items can be tested for reliability measures using Kuder Richardson Formula. However, the most common reliability estimator, Cronbach's alpha, is considered a general case of the KR20. The KR-20 Reliability Coefficients ranged from .781-.884, with a median of 0.81. Values of KR-20 range from 0.0 to 1.0 and as a rule of thumb 0.7 is an acceptable value (Salkind, 2010). KR-20 Reliability estimates are presented in Table below.

Table: Reliability Statistics

Construct	Number of Items in Construct	KR-20 Reliability Coefficient
Plagiarism	11	.793
Fabrication	4	.785
Falsification	4	.845
Academic Sabotage	4	.884
Deception	4	.853
Collusion	4	.781
Disruptive Conduct	4	.812

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Analysis of Objective No. 02: To Ascertain the Awareness Level of Undergraduates about Academic Dishonesty

Table: Awareness Level of undergraduates regarding Academic Dishonesty

Theme	No. of items	No. of respondents	Correct Responses (%)	Mean	SD
Academic Dishonesty	35	215	25.37	8.94	3.50

Analysis: According to the data presented in the above table, a total of 35 items about Academic Dishonesty were asked from 215 respondents from SBBU and SBBUVAS. The total of these correct responses stood at 25.37% which indicates that the respondents of SBBU and SBBUVAS had 25.37% awareness of Academic Honesty. The mean awareness about this theme was 8.94 with a Standard Deviation of 3.50.

Analysis of Objective No. 03: To ascertain the difference in awareness level of undergraduates about Academic Dishonesty according to institute

Table: Difference in the Awareness Level of Undergraduates of SBBU and SBBUVAS about Academic Dishonesty

Academic Dishonesty	University	N	Correct Responses (%)	\bar{X}	SD	T	Df	P
	SBBU	183	25.43	8.97	3.64	.33	213	.74
	SBBUVAS	32	25.00	8.75	2.53			

Analysis: According to the data presented in the above table, the awareness of respondents from SBBU and SBBUVAS about Academic Dishonesty stood at 25.43% and 25% respectively. Further, to compare awareness of Academic Dishonesty among undergraduates of SBBU and SBBUVAS, independent samples t-test was performed. There was no significant difference in the Awareness Level of Undergraduates of SBBU ($\bar{X}=8.97$, $SD=3.64$) and SBBUVAS ($\bar{X}=8.75$, $SD=2.53$), $t = .33$ at $p=.74 > 0.05$ level of significance. These results advocate that institutional differences have no significant effect on the awareness of undergraduates about Academic Dishonesty.

Analysis of Objective No. 04: To ascertain the difference in awareness level of undergraduates about Academic Dishonesty according to gender

Table: Difference in the Awareness Level of Male and Female Undergraduates about Academic Dishonesty

Academic Dishonesty	Gender	N	Correct Responses (%)	\bar{X}	SD	T	Df	P
	Male	165	25.25	8.92	3.35	.19	213	.85
	Female	50	25.77	9.02	3.97			

Analysis: According to the data presented in the above table, the awareness of male and female respondents from SBBU and SBBUVAS about Academic Dishonesty stood at 25.25% and 25.77% respectively. Further, to compare awareness of Academic Dishonesty among male and female undergraduates of SBBU and SBBUVAS, independent samples t-test was

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performed which showed that there was no significant difference in the awareness level of male undergraduates ($\bar{X}=8.92$, $SD=3.35$) and female undergraduates ($\bar{X}=9.02$, $SD=3.97$, $t = -.19$ at $p = 0.85 > 0.05$ level of significance. These results indicate that no significant difference was found in the awareness of male and female undergraduates about Academic Dishonesty.

Section Three: Research Questions Wise Analyses

The following section gives an analysis of research questions that were answered through this study.

Analysis of Research Question No. 01: 1. What is the awareness level of undergraduates about Fabrication?

Table: Awareness Level of Undergraduates about Fabrication

Theme	No. of items	No. of respondents	Correct Responses (%)	Mean	SD
Fabrication	4	215	25.81	0.26	0.22

Analysis: According to the data presented in the above table, a total of four items about Fabrication were asked from 215 respondents from SBBU and SBBUVAS. The total of these correct responses stood at 25.81% which indicates that the respondents of SBBU and SBBUVAS had 25.81% awareness of Fabrication. The mean awareness about this theme was 0.26 with a Standard Deviation of 0.22

Analysis of Research Question No. 02: Does the awareness level of undergraduates about Fabrication differ according to Institute??

Table: Difference in the Awareness Level of Undergraduates of SBBU and SBBUVAS about Academic Dishonesty

Academic Dishonesty	University	N	Correct Responses (%)	\bar{X}	SD	T	df	P
	SBBU	183	25.43	8.97	3.64	.33	213	.74
	SBBUVAS	32	25.00	8.75	2.53			

Analysis: According to the data presented in the above table, the awareness of respondents from SBBU and SBBUVAS about Academic Dishonesty stood at 25.43% and 25% respectively. Further, to compare awareness of Academic Dishonesty among undergraduates of SBBU and SBBUVAS, independent samples t-test was performed. There was no significant difference in the Awareness Level of Undergraduates of SBBU ($\bar{X}=8.97$, $SD=3.64$) and SBBUVAS ($\bar{X}=8.75$, $SD=2.53$), $t = .33$ at $p = .74 > 0.05$ level of significance. These results advocate that institutional differences have no significant effect on the awareness of undergraduates about Academic Dishonesty.

Analysis of Research Question No. 03: Does the awareness level of undergraduates about Fabrication differ according to Gender?

Table: Difference in the Awareness Level of Male and Female Undergraduates about Academic Dishonesty

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Academic Dishonesty	Gender	N	Correct Responses (%)	\bar{X}	SD	T	Df	P
	Male	165	25.25	8.92	3.35	.19	213	.85
	Female	50	25.77	9.02	3.97			

Analysis: According to the data presented in the above table, the awareness of male and female respondents from SBBU and SBBUVAS about Academic Dishonesty stood at 25.25% and 25.77% respectively. Further, to compare awareness of Academic Dishonesty among male and female undergraduates of SBBU and SBBUVAS, independent samples t-test was performed which showed that there was no significant difference in the awareness level of male undergraduates ($\bar{X}=8.92$, $SD=3.35$) and female undergraduates ($\bar{X}=9.02$, $SD=3.97$, $t = -.19$ at $p = 0.85 > 0.05$ level of significance. These results indicate that no significant difference was found in the awareness of male and female undergraduates about Academic Dishonesty.

Analysis of Research Question No. 04: What is the awareness level of undergraduates about Falsification?

Table: Awareness Level of Undergraduates about Falsification

Theme	No. of items	No. of respondents	Correct Responses (%)	Mean	SD
Falsification	4	215	22.56	0.26	0.22

Analysis: According to the data presented in the above table, a total of four items about Falsification were asked from 215 respondents from SBBU and SBBUVAS. The total of these correct responses stood at 22.56% which indicates that the respondents of SBBU and SBBUVAS had 22.56% awareness of Falsification. The mean awareness about this theme was 0.26 with a Standard Deviation of 0.22.

Analysis of Research Question No. 05: Does the awareness level of undergraduates about Falsification differ according to Institute?

Table: Difference in the Awareness Level of Undergraduates of SBBU and SBBUVAS about Falsification

Falsification	University	N	Correct Responses (%)	\bar{X}	SD	T	df	P
	SBBU	183	22.68	.23	.23	0.19	213	0.85
	SBBUVAS	32	21.88	.22	.21			

Analysis: According to the data presented in the above table, the awareness of respondents from SBBU and SBBUVAS about Falsification stood at 22.68% and 21.88% respectively. Further, to compare awareness of Falsification among undergraduates of SBBU and SBBUVAS, independent samples t-test was performed which indicated that there was no significant difference in the Awareness Level of Undergraduates of SBBU ($\bar{X}=.23$, $SD=.23$) and SBBUVAS ($\bar{X}=22$, $SD=.21$), $t = -0.19$ at $p = 0.85 > 0.05$ level of significance. These results advocate that institutional difference has no significant effect on the awareness of undergraduates about Falsification.

Analysis of Research Question No. 06: Does the awareness level of undergraduates about Falsification differ according to Gender?

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Table: Difference in the Awareness Level of Male and Female Undergraduates about Falsification

Falsification	Gender	N	Correct Responses (%)	\bar{X}	SD	T	df	P
	Male	165	23.48	.23	.23	1.11	213	.27
	Female	50	19.50	.20	.20			

Analysis: According to the data presented in the above table, the awareness of male and female respondents from SBBU and SBBUVAS about Falsification stood at 23.48 % and 19.50% respectively. Further, to compare awareness of Falsification among male and female undergraduates of SBBU and SBBUVAS, independent samples t-test was performed. There was no significant difference in the awareness level of male undergraduates ($\bar{X}=.23, SD=.23$) and female undergraduates ($\bar{X}=.20, SD=.20$), $t = 1.11$ at $p = 0.27 > 0.05$ level of significance. These results indicate that no significant difference was found in the awareness of male and female undergraduates about Falsification.

Analysis of Research Question No. 07: What is the extent of awareness of undergraduates about Academic Sabotage?

Table: Awareness Level of Undergraduates about Academic Sabotage

Theme	No. of items	No. of respondents	Correct Responses (%)	Mean	SD
Academic Sabotage	4	215	25.47	0.25	0.23

Analysis: According to the data presented in the above table, a total of four items about Academic Sabotage were asked from 215 respondents from SBBU and SBBUVAS. The total of these correct responses stood at 25.47% which indicates that the respondents of SBBU and SBBUVAS had 25.47% awareness of Academic Sabotage. The mean awareness about this theme was 0.25 with a Standard Deviation of 0.23.

Analysis of Research Question No. 08: Does the awareness level of undergraduates about Academic Sabotage differ according to Institute?

Table: Difference in the Awareness Level of Undergraduates of SBBU and SBBUVAS about Academic Sabotage

Academic Sabotage	University	N	Correct Responses (%)	\bar{X}	SD	T	df	p
	SBBU	183	25.55	.26	.24	.12	213	.90
	SBBUVAS	32	25.00	.25	.23			

Analysis: According to the data presented in the above table, the awareness of respondents from SBBU and SBBUVAS about Academic Sabotage stood at 25.55% and 25% respectively. Further, to compare awareness of Academic Sabotage among undergraduates of SBBU and SBBUVAS, independent samples t-test was performed which showed that there was no significant difference in the Awareness Level of Undergraduates of SBBU ($\bar{X}=.26, SD=.24$) and SBBUVAS ($\bar{X}=.25, SD=.23$), $t = -0.12$ at $p = 0.90 > 0.05$ level of significance. These results advocate that institutional difference has no significant effect on the awareness of undergraduates about Academic Sabotage.

Analysis of Research Question No. 09: Does the awareness level of undergraduates about Academic Sabotage differ according to Gender?

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Table: Difference in the Awareness Level of Male and Female Undergraduates about Academic Sabotage

	Gender	N	Correct Responses (%)	\bar{X}	SD	T	df	p
Academic Sabotage	Male	165	26.06	.26	.25	.79	213	.43
	Female	50	23.50	.24	.18			

Analysis: According to the data presented in the above table, the awareness of male and female respondents from SBBU and SBBUVAS about Academic Sabotage stood at 26.06% and 23.50% respectively. Further, to compare awareness of Academic Sabotage among male and female undergraduates of SBBU and SBBUVAS, independent samples t-test was performed which indicated that there was no significant difference in the awareness level of male undergraduates (\bar{X} =.26, SD =.25) and female undergraduates (\bar{X} =.24, SD =.18), t =.79 at p = 0.43>0.05 level of significance. These results indicate that no significant difference was found in the awareness of male and female undergraduates about Academic Sabotage.

Analysis of Research Question No. 10: What is the extent of awareness of undergraduates about Disruptive Conduct?

Table: Awareness Level of Undergraduates about Disruptive Conduct

Theme	No. of items	No. of respondents	Correct Responses (%)	Mean	SD
Disruptive Conduct	4	215	31.86	0.25	0.23

Analysis: According to the data presented in the above table, a total of four items about Disruptive Conduct were asked from 215 respondents from SBBU and SBBUVAS. The total of these correct responses stood at 31.86 which indicate that the respondents of SBBU and SBBUVAS had 31.86% awareness of Disruptive Conduct. The mean awareness about this theme was 0.25 with a Standard Deviation of 0.23.

Analysis of Research Question No. 11: Does the awareness level of undergraduates about Disruptive Conduct differ according to Institute?

Table: Difference in the Awareness Level of Undergraduates of SBBU and SBBUVAS about Disruptive Conduct

	University	N	Correct Responses (%)	\bar{X}	SD	T	df	p
Disruptive Conduct	SBBU	183	31.97	.32	.30	.17	213	.87
	SBBUVAS	32	31.25	.31	.21			

Analysis: According to the data presented in the above table, the awareness of respondents from SBBU and SBBUVAS about Disruptive Conduct stood at 31.97% and 31.25% respectively. Further, to compare awareness of Disruptive Conduct among undergraduates of SBBU and SBBUVAS, independent samples t-test was performed which revealed that there was no significant difference in the Awareness Level of Undergraduates of SBBU (\bar{X} =.32, SD =.30) and SBBUVAS (\bar{X} =.31 SD =.21), t =.17 at p =.87>0.05 level of significance. These results advocate that institutional difference has no significant effect on the awareness of undergraduates about Disruptive Conduct.

Analysis of Research Question No. 12: Does the awareness level of undergraduates about Disruptive Conduct differ according to Gender?

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Table: Difference in the Awareness Level of Male and Female Undergraduates about Disruptive Conduct

	Gender	N	Correct Responses (%)	\bar{X}	SD	T	df	p
Disruptive Conduct	Male	165	31.67	.32	.27	-.32	213	.75
	Female	50	33.00	.33	.32			

Analysis: According to the data presented in the above table, the awareness of male and female respondents from SBBU and SBBUVAS about Disruptive Conduct stood at 31.67% and 33% respectively. Further, to compare awareness of Disruptive Conduct among male and female undergraduates of SBBU and SBBUVAS, independent samples t-test was performed which showed that there was no significant difference in the awareness level of male undergraduates (\bar{X} =.32, SD =.27) and female undergraduates (\bar{X} =.33, SD =.32), $t = -.32$ at $p = 0.75 > 0.05$ level of significance was. These results indicate that no significant difference was found in the awareness of male and female undergraduates about Disruptive Conduct.

Analysis of Research Question No. 13: What is the awareness level of undergraduates about Deception?

Table: Awareness Level of Undergraduates about Deception

Theme	No. of items	No. of respondents	Correct Responses (%)	Mean	SD
Deception	4	215	17.09	0.17	0.22

Analysis: According to the data presented in the above table, a total of four items about Deception were asked from 215 respondents from SBBU and SBBUVAS. The total of these correct responses stood at 17.09% which indicates that the respondents of SBBU and SBBUVAS had 17.09% awareness of Deception. The mean awareness about this theme was 0.17 with a Standard Deviation of 0.22.

Analysis of Research Question No. 14: Does the awareness level of undergraduates about Deception differ according to Institute?

Table: Difference in the Awareness Level of Undergraduates of SBBU and SBBUVAS about Deception

	University	N	Correct Responses (%)	\bar{X}	SD	T	df	p
Deception	SBBU	183	16.94	.17	.22	-.25	213	.81
	SBBUVAS	32	17.97	.18	.21			

Analysis: According to the data presented in the above table, the awareness of respondents from SBBU and SBBUVAS about Deception stood at 16.94% and 17.97% respectively. Further, to compare awareness of Deception among undergraduates of SBBU and SBBUVAS, independent samples t-test was performed. There was no significant difference in the Awareness Level of Undergraduates of SBBU (\bar{X} =.17, SD =.22) and SBBUVAS (\bar{X} =.18 SD =.21), $t = -.25$ at $p = .81 > 0.05$ level of significance. These results advocate that institutional difference has no significant effect on the awareness of undergraduates about Deception.

Analysis of Research Question No. 15: Does the awareness level of undergraduates about Deception differ according to Gender?

Table: Difference in the Awareness Level of Male and Female Undergraduates about Deception

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	Gender	N	Correct Responses (%)	\bar{X}	SD	T	df	p
Deception	Male	165	15.91	.16	.20	-1.24	213	.22
	Female	50	21.00	.21	.27			

Analysis: According to the data presented in the above table, the awareness of male and female respondents from SBBU and SBBUVAS about Deception stood at 15.91% and 21% respectively. Further, to compare awareness of Deception among male and female undergraduates of SBBU and SBBUVAS, independent samples t-test was performed. There was no significant difference in the awareness level of male undergraduates ($\bar{X}=16, SD=.20$) and female undergraduates ($\bar{X}=21, SD=.27, t = -1.24$ at $p = 0.22 > 0.05$ level of significance. These results indicate that no significant difference was found in the awareness of male and female undergraduates about Deception.

Analysis of Research Question No. 16: What is the awareness level of undergraduates about Collusion?

Table: Awareness Level of Undergraduates about Collusion

Theme	No. of items	No. of respondents	Correct Responses (%)	Mean	SD
Collusion	4	215	25.12	0.25	0.22

Analysis: According to the data presented in the above table, a total of four items about Collusion were asked from 215 respondents from SBBU and SBBUVAS. The total of these correct responses stood at 25.12% which indicates that the respondents of SBBU and SBBUVAS had 25.12% awareness of Collusion. The mean awareness about this theme was 0.25 with a Standard Deviation of 0.22.

Analysis of Research Question No. 17: Does the awareness level of undergraduates about Collusion differ according to Institute?

Table: Difference in the Awareness Level of Undergraduates of SBBU and SBBUVAS about Collusion

	University	N	Correct Responses (%)	\bar{X}	SD	T	df	P
Collusion	SBBU	183	24.59	.25	.21	-.79	213	.43
	SBBUVAS	32	28.13	.28	.24			

Analysis: According to the data presented in the above table, the awareness of respondents from SBBU and SBBUVAS about Collusion stood at 24.59% and 28.13% respectively. Further, to compare awareness of Collusion among undergraduates of SBBU and SBBUVAS, independent samples t-test was performed which indicated that there was no significant difference in the Awareness Level of Undergraduates of SBBU ($\bar{X}=25, SD=.21$) and SBBUVAS ($\bar{X}=28, SD=.24, t = -.79$ at $p=.43 > 0.05$ level of significance. These results advocate that institutional difference has no significant effect on the awareness of undergraduates about Collusion.

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Analysis of Research Question No. 18: Does the awareness level of undergraduates about Collusion differ according to Gender?

Table: Difference in the Awareness Level of Male and Female Undergraduates about Collusion

	Gender	N	Correct Responses (%)	\bar{X}	SD	T	df	P
Collusion	Male	165	25.00	.25	.22	-.06	213	.96
	Female	50	25.50	.26	.20			

Analysis: According to the data presented in the above table, the awareness of male and female respondents from SBBU and SBBUVAS about Collusion stood at 25% and 25.50% respectively. Further, to compare awareness of Collusion among male and female undergraduates of SBBU and SBBUVAS, independent samples t-test was performed which revealed that there was no significant difference in the awareness level of male undergraduates (\bar{X} =.25, SD =.22) and female undergraduates (\bar{X} =.26, SD =.20, t = -.06 at p = 0.96>0.05 level of significance. These results indicate that no significant difference was found in the awareness of male and female undergraduates about Collusion.

Analysis of Research Question No. 19: How much do undergraduates know about Plagiarism?

Table: Awareness Level of Undergraduates about Plagiarism

Theme	No. of items	No. of respondents	Correct Responses (%)	Mean	SD
Plagiarism	11	215	26.93	0.27	0.16

Analysis: According to the data presented in the above table, a total of eleven items about Plagiarism were asked from 215 respondents from SBBU and SBBUVAS. The total of these correct responses stood at 26.93% which indicates that the respondents of SBBU and SBBUVAS had 26.93% awareness of Plagiarism. The mean awareness about this theme was 0.27 with a Standard Deviation of 0.16.

Analysis of Research Question No. 20: Does the awareness level of undergraduates about Plagiarism differ according to Institute?

Table: Difference in the Awareness Level of Undergraduates of SBBU and SBBUVAS about Plagiarism

	University	N	Correct Responses (%)	\bar{X}	SD	T	df	P
Plagiarism	SBBU	183	27.47	.28	.16	1.36	213	.18
	SBBUVAS	32	23.86	.24	.14			

Analysis: According to the data presented in the above table, the awareness of respondents from SBBU and SBBUVAS about Plagiarism stood at 27.47% and 23.86% respectively. Further, to compare awareness of Plagiarism among undergraduates of SBBU and SBBUVAS, independent samples t-test was performed. There was no significant difference in the Awareness Level of Undergraduates of SBBU (\bar{X} =.28, SD =.16) and SBBUVAS (\bar{X} =.24 SD =.14), t =1.36 at p =.18>0.05 level of significance. These results advocate that institutional difference has no significant effect on the awareness of undergraduates about Plagiarism.

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Analysis of Research Question No. 21: Does the awareness level of undergraduates about Plagiarism differ according to Gender?

Table: Difference in the Awareness Level of Male and Female Undergraduates about Plagiarism

	Gender	N	Correct Responses (%)	\bar{X}	SD	T	df	P
Plagiarism	Male	165	26.72	.27	.17	-.12	213	.91
	Female	50	27.64	.28	.14			

Analysis: According to the data presented in the above table, the awareness of male and female respondents from SBBU and SBBUVAS about Plagiarism stood at 26.72% and 27.64% respectively. Further, to compare awareness of Plagiarism among male and female undergraduates of SBBU and SBBUVAS, independent samples t-test was performed. There was no significant difference in the awareness level of male undergraduates (\bar{X} =.27, SD =.17) and female undergraduates (\bar{X} =.28, SD =.14, t = -.12 at p = 0.91>0.05 level of significance. These results indicate that no significant difference was found in the awareness of male and female undergraduates about Plagiarism.

Discussion

Not engaging in Academic Dishonesty is a prerequisite not only for the proper conduct of research but also for the prevention of research errors such as Falsification and Falsification in all disciplines. Because research experience is a skill recommended in basic education, students should be aware of what are Fabrication and Falsification and how to uphold academic honesty. When examining the data analysis results about Fabrication it indicated that the combined awareness of all the respondents of this study was 25.81%, with (mean=0.26 and SD =0.22) which is at a low level as per the definition and levels of awareness determined for this study. The findings on the items regarding awareness about Falsification revealed that the combined awareness of all the respondents of this study was 22.56 %, with (mean=0.26 and SD =0.22) which is at a low level as per the definition and levels of awareness determined for this study. These results are consistent with the findings of Ababneh, Alzoubi, & Ababneh's (2020) study, which found that the student's knowledge and understanding of Fabrication, Falsification, and plagiarism were inadequate.

The data about Academic Sabotage suggested that the combined awareness of all the respondents of this study was 25.47% with (mean=0.25 and SD =0.23) which is at a low level as per the definition and levels of awareness determined for this study. According to Aurich (2012), while there is academic Sabotage in higher education institutions, students do not understand that this threatens the academic integrity of the institution or the reputation of the program. These findings support this study by mirroring that Academic Sabotage is prevalent but students being unaware of its presence are ignorant of its consequences. The data about Disruptive Conduct implies that the combined awareness of all the respondents of this study was 31.86% with (mean=0.25 and SD =0.23) which is at a low level as per the definition and levels of awareness determined for this study.

The study revealed that the combined awareness of all the respondents about Deception was 17.09% with (mean=0.17 and SD =0.22) which is a very low level as per the definition and levels of awareness determined for this study. The study found that the combined awareness

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of all the respondents about Collusion was 25.12% with (mean=0.25 and SD=0.22) which is at a low level as per the definition and levels of awareness determined for this study. These findings expose that students are confused about the difference between collusion and collaboration. These findings highlight that it is more important to draw a clear and transparent line between collusion and collaboration. Further, these results are in line with the results of the prior western studies. A study by Sutton and Taylor (2011) showed that students are trapped amid an understanding of academic competitiveness and a real desire to support their peers in their work. In 2005, Ruth Barrett and Anna Cox compared the awareness of lecturers and students on plagiarism and collusion in a university of the United Kingdom and found that the awareness of both lecturers and students about plagiarism was rigorous but the same was not correct about collusion. Maureen, Dawson and, Overfield (2006) investigated students understanding of plagiarism and established that the students were not clear about the differences between collusion, plagiarism, and permissible group tasks.

The findings of the items regarding awareness about Plagiarism indicated that the combined awareness of all the respondents of this study was 26.93% with (mean=0.27 and SD=.16) which is at a low level as per the definition and levels of awareness determined for this study. The findings related to awareness about plagiarism were consistent with the findings of several Pakistani studies conducted on plagiarism. Javaeed, Khan, Khan, and Ghauri (2019) examined the views of medical students at two Rawalpindi Medical Schools on plagiarism and found that 86.91% of the participants were unaware of plagiarism. The research by Ramzan, Munir, Siddique, and Asif (2011), investigated the awareness of 365 students about plagiarism and found that students' awareness level about plagiarism and university plagiarism policies and processes was low. Results also discovered that students did not comprehend plagiarism as a form of Academic Dishonesty. Khan, Bibi, and Khan (2019) noted that final-year undergraduates from five physiotherapy institutions in Peshawar lacked knowledge and understanding of plagiarism and the consequences of involvement in it. Shirazi, Jafarey & Moazam (2010) determined the awareness and perceptions of fourth-year medical students on plagiarism and noted that there was a widespread lack of awareness among medical students about plagiarism.

Finally, the data analysis results about Academic Dishonesty indicated that the combined awareness of all the respondents of this study about it was 25.37% with (mean=8.94 and SD=3.50) which is also at a low level as per the definition and levels of awareness determined for this study. Evidence of a similar tendency was glimpsed in Soroya, Hashmi, and Soroya's (2016) study, which found that there was a low level of academic integrity among undergraduates. Although Soroya, Hashmi, and Soroya's (2016) study focused on the prevalence of academic integrity it can be anticipated that the awareness level of those respondents about academic integrity was also low. Awareness and perception are two parts that affect a person's judgment and actions and students' awareness and perception influence their involvement in plagiarism. Orim, Borg, and Awala-Ale (2013) pointed out that most plagiarism happens due to a lack of awareness and skills. As plagiarism is a form of Academic Dishonesty so it can be expected that the awareness of Academic Dishonesty is also low.

These findings indicate that Disruptive Conduct (31.86 %) is the most known domain of Academic Dishonesty to all the respondents and the least known aspect of Academic

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Dishonesty to all the respondents is Deception which stood at a 17.09% awareness level.

Conclusion, Recommendations, and Areas for Future research

Conclusion

This research was set out to develop and use Academic Dishonesty Awareness Questionnaire (ADAQ). Based on the analysis of items, developed through literature review, reviewing websites of renowned international universities, consultations with experts and supervisor, to find out this awareness level, it can be concluded that this awareness level is low as per the definitions of awareness levels determined for this study. There was no significant difference in the awareness of respondents' both university-wise and gender wise across Academic Dishonesty. The results indicated that the combined awareness of all the respondents of this study about Academic Dishonesty was (25.37 %, mean=8.94, SD=03.50). There was no significant difference in the awareness level of undergraduate students of SBBU (25.43 %, \bar{X} =8.97, SD =3.64) and SBBUVAS (25.00 %, \bar{X} =8.75 SD =2.53), $t = .332$, $p=.74 > 0.05$ level of significance about Academic Dishonesty. This study effectively achieved the objectives and answered the research questions. To comprehend the impacts of the findings brought out in this study, future studies could use ADAQ-35 and could also address the prevalence level of Academic Dishonesty in these universities through faculty perceptions. The pragmatic results of this research provided the researchers with a reliable and validated instrument to measure awareness about Academic Dishonesty. These results also provided the authorities of these universities with a new lens to view their search for academic integrity that will help them in devising codes of ethics by adjusting to the prevailing unawareness about academic honesty. The researchers can use ADAQ-35 to measure awareness about Academic Dishonesty. The universities can use this research as such to develop and improve guidelines for honour codes and academic honesty policies because this study indicated the weak areas that need improvements. The student's knowledge of the academic honesty of their institutions is more important than their first-hand experience in the classroom. There is a lack and need for increasing awareness of academic honesty guidelines. The findings of this research also portrayed an elaborated understanding and a vivid picture of the understanding level of undergraduates of two relatively young higher education institutions in rural Sindh about seven domains of academic honesty.

Recommendations

Based on the above conclusions, the authorities of these universities should consider:

- The establishment of academic integrity centres
- The circulation of the HEC Plagiarism Policy on their websites
- The taking of proactive measures to improve awareness of undergraduates regarding academic honesty by organizing seminars in the first semester
- Apprising students about academic honesty through awareness walks, poster competitions, distributing brochures, inserts, and stickers,
- Preparing and providing students with resources on academic honesty awareness like teaching guides, modules, recorded videos and may also be done as part of orientation for new batches
- Hosting educational and social events to raise the awareness of the students about

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academic honesty

- Partner shipping with, and seeking cooperation from other well-reputed universities of the country that have created their academic honesty policies as it will help in standardizing the information on academic honesty to which students will be ultimately exposed
- Creating classes on Turnitin and sharing the IDs of the same with the undergraduates to increase the originality of their work
- Teaching students how to use and interpret Turnitin reports
- Establishment of a student learning management system and introduction of mandatory similarity checks for assignment submissions
- Giving presentations to parents and guardians will help them learn to help their children transition to university-level learning

Areas for Future Research

Based on the above conclusions, future research may focus on extending this research by:

- By using ADAQ-35 to measure Academic Dishonesty within other populations
- Exploring the faculty perceptions about Academic Dishonesty
- Determining the awareness level of faculty about Academic Dishonesty
- Ascertaining the prevalence of Academic Dishonesty at SBBU and SBBUVAS
- Expanding the scope of this research to other domains of Academic Dishonesty
- By delimiting this research to the undergraduates of other HEIs of Shaheed Benazirabad

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