



The Urbana Free Library

210 West Green Street, Urbana, Illinois 61801 • 217-367-4057 • fax: 217-367-4061 • urbanafreelibrary.org

MEMORANDUM

TO: The City of Urbana, Civil Service Commission

FROM: Dawn Cassady, Associate Director
Rachel Fuller, Director of Adult & Youth Services and Acquisitions

RE: Report on Applications for Circulation Clerk/Information Assistant Position

DATE: November 17, 2021

A. Summary

The Urbana Free Library considered 104 of 138 applicants using a rubric based on the minimum qualifications for the position. 34 applicants did not meet minimum qualifications for the position. Applicants who met the minimum qualifications were scored based on their training and experience. Urbana preference points and veteran status points were added as appropriate. Using this scoring rubric resulted in 51 applicants who scored 50 points or higher. The sample score sheet has been included in this packet.

B. Background

The position was open for application from October 1, 2021, to November 11, 2021. The Urbana Free Library received 104 applications from applicants who met the minimum qualifications for the position. Nine applicants opted out of giving information on the EEO form, so numerically the breakdown of the applicants who did give information is as follows:

Male: 45 Non-Minority: 93

Female: 85 Minority: 36

C. Application Screening

Required qualifications included an associate's degree or equivalent and one year successful, continuous work experience. Public service, library, and supervisory experience were all preferred. Prior experience with Polaris ILS; bilingual skills; and training and experience in reference, technology, and adult, teen, or children's services were desired.

Appendix B



CIRCULATION CLERK – FULL TIME/PART TIME

JOB DESCRIPTION

Department: Circulation Services	Benefits: Yes (pro-rated for PT)
Division: N/A	Time: General minimum of 39 hours per week for Full Time and 20 hours per week for Part Time, including evening and weekend hours. Part Time employees may work additional hours above the 20 base hours as requested by their supervisors for the Library's needs.
Job Type: Civil Service (FT) ; Non-Civil Service (PT)	FLSA Status: Non-Exempt
Reports To: Associate Director	Pay Grade: 23 for Circulation Clerks; 25 for Information Assistants

JOB SUMMARY

The Circulation Clerk performs detailed clerical work that involves the automated circulation of Library materials and the maintenance of related files. Circulation duties demand extensive public interaction, and the clerk must be continually positive and friendly while handling many tasks at once in a busy environment. Duties are carried out under specific procedural guidelines and policies, and the Circulation Clerk reports to the Associate Director; Circulation, Café, and Volunteer Manager; or senior Circulation Clerks. A full-time or part-time Circulation Clerk may also be trained to work as an Information Assistant, with duties at the first-floor Information Desk, the second-floor adult Reference Desk and computer lab, and the children's Question Desk. A full-time or part-time Circulation Clerk also may create and/or maintain schedules for Library staff.

ESSENTIAL FUNCTIONS

- Serves the public at the circulation desk by checking out and checking in library materials, collecting fines, issuing library cards, explaining policies, etc.
- Utilizes the Library's computer system for various circulation services and functions.
- Answers telephone both for Circulation Services and for the entire Library.
- Issues borrowers' cards and maintains files.
- Handles monetary transactions with accuracy.
- Processes interlibrary loans (FT) and hold requests.
- Represents the Library at outreach events in the community.
- Shares responsibility for the smooth running of the circulation desk, including maintaining a prompt and reliable attendance record.

- Supervises staff and manages workflow in the absence of senior Circulation Clerks.
- Ensures the security of Library items and that equipment is in proper working order for a secure collection.
- May create and/or maintain schedules for Library staff.
- Performs other related duties as assigned.
- Attends department and other meetings as scheduled.

JOB REQUIREMENTS

Education & Experience

- Associate's degree or equivalent required.
- 25 words per minute keyboarding skills.
- One year successful, continuous work experience.
- Public service, library, and supervisory experience all preferred.
- Bilingual skills (especially Spanish, French, or Chinese) desirable.

Knowledge of

- Basic word processing and spreadsheet software.
- General office and clerical procedures.

Skills

- Strong commitment to excellent public service; friendly, energetic, and adaptable.
- Good organizational, interpersonal, and decision-making skills to work effectively with patrons, staff, and visitors.
- Excellent verbal and nonverbal communication skills.
- Dependability and honesty.
- Physical strength and agility sufficient to push loaded book trucks, to lift and carry up to 40 pounds, to access high and low shelves, and to work on one's feet for an entire shift.
- Ability to assume responsibility and work neatly, efficiently, and accurately without direct supervision.

Ability to

- Quickly develop a thorough knowledge of the Library's circulation system and security system.

- Quickly develop a thorough knowledge of circulation procedures and activities.
- Master complex, detailed routines.
- Understand and follow detailed oral and written instructions.
- Learn and follow all relevant Library policies.
- Complete work with speed and accuracy and handle frequent, sudden task changes effectively.
- Work with the public, visitors, and staff in a consistently friendly and courteous manner.
- Work in a team atmosphere in a consistently cooperative manner.
- Communicate effectively orally and in writing.
- Enforce Library's policies.
- Work full range of Library hours, including evenings and weekends. Maximum availability desirable.
- Work additional hours beyond those regularly scheduled as necessary and for the Library's needs.

Licenses, Certifications, and Memberships Required

- None.

CONTACTS: INTERNAL/EXTERNAL

- Daily contact with patrons and staff.
- Frequent contact with visitors.

SUPPLEMENTAL INFORMATION

Working Environment: *The work environment characteristics described herein are representative of those an employee encounters while performing the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.*

- The work will occur primarily at The Urbana Free Library.
- Occasionally, staff perform outreach at offsite locations.
- Typical work schedule could include any hours that the Library is open in addition to time before and afterwards, with flexibility depending on the needs of the department.

Physical Strength and Agility:

Physical strength and agility sufficient to perform assigned tasks:

- While performing the duties of this job, the employee is frequently required to walk, sit, and talk or hear.
- The employee is frequently required to use hands to handle, feel, or operate objects, tools, or controls; and reach with hands and arms.
- The employee is occasionally required to climb or balance; stoop, kneel, crouch, or crawl.
- The employee must occasionally lift and/or move up to 40 pounds.
- Vision: See in the normal visual range with or without correction; vision sufficient to read computer screens and printed documents; visually inspect work in progress; and the ability to adjust focus to both print and electronic text.
- Hearing: Hear in the normal audio range with or without correction.
- Other: Lifting, pushing, and keyboarding.

The physical demands described herein are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

The duties listed above are intended only as illustrations of the various types of work that may be performed. The omission of specific statements of duties does not exclude them from the position if the work is similar, related, or a logical assignment to the position.

The job description does not constitute an employment agreement between the employer and employee and is subject to change by the employer as the needs of the employer and requirements of the job change.

The Urbana Free Library is an Equal Opportunity Employer.

Last updated: September 30, 2021

Appendix C



INFORMATION ASSISTANT – FULL TIME/PART TIME

JOB DESCRIPTION

Department:	Adult & Youth Services	Benefits	Yes (pro-rated for PT)
Division:	N/A	Time:	General minimum of 39 hours per week for Full Time and 20 hours per week for Part Time, including evening and weekend hours, in combination with hours in Circulation if also hired as a Circulation Clerk. Part-time employees may work additional hours above the 20 base hours as requested by their supervisors for the Library's needs.
Job Type:	Civil Service (FT) ; Non-Civil Service (PT)	FLSA Status:	Non-Exempt
Reports To:	Director of Adult & Youth Services and Acquisitions	Pay Grade:	25

JOB SUMMARY

Information Assistants provide information services, bibliographic instruction, and computer lab assistance to patrons of all ages; participate in outreach and programming; provide excellent customer service; and carry out other duties as assigned. Duties are carried out under specific procedural guidelines and Information Assistants report to the Director of Adult & Youth Services and Acquisitions. Scheduling is coordinated in conjunction with hours worked in other departments, if applicable. A full-time or part-time Information Assistant also may create and/or maintain schedules for Library staff.

ESSENTIAL FUNCTIONS

- Provides routine information services for patrons.
- Assists patrons with the online catalog, the Internet, computer software, fax, and copier.
- Assists with creation of marketing and display materials.
- Participates in outreach and programming events.
- Upholds Library Rules of Behavior and other Library policies.
- May be a Public Notary.
- May create and/or maintain schedules for Library staff.
- Performs other related duties as assigned.

- Attends department and other meetings as scheduled.

JOB REQUIREMENTS

Education & Experience

- Training or experience in providing information services and technology assistance; experience in adult, teen, or children's services desirable.
- Experience with electronic resources desirable.
- Prior experience with the Polaris ILS desirable.
- Associate's degree or equivalent required.
- 25 words per minute keyboarding skills.
- One year successful, continuous work experience.
- Public service, library, and supervisory experience all preferred.
- Bilingual skills (especially Spanish, French, or Chinese) desirable.

Knowledge of

- Knowledge of print and digital information sources.
- Creative reference and database skills.
- Working knowledge of basic word processing and spreadsheet software, plus additional Microsoft Office modules.

Skills

- Ability to quickly develop an effective working knowledge of the Library's automation system and of relevant databases.
- Good organizational, interpersonal, and decision-making skills.
- Excellent verbal and nonverbal communication skills.
- Dependability and honesty.
- Strong customer service orientation.
- Commitment to serving a diverse community.
- Physical strength and agility sufficient to perform assigned tasks.

Ability to

- Master complex, detailed routines.
- Understand and follow detailed oral and written instructions.
- Learn and follow all relevant Library policies.

- Complete work with speed and accuracy and handle frequent, sudden task changes effectively.
- Work with the public, visitors, and staff in a consistently friendly and courteous manner.
- Work in a team atmosphere in a consistently cooperative manner.
- Assume responsibility and work neatly, efficiently, and accurately without direct supervision.
- Communicate effectively orally and in writing.
- Enforce Library policies.
- Work full range of Library hours, including evenings and weekends. Maximum availability desirable.
- Work additional hours beyond those regularly scheduled as necessary and for the Library's needs.

Licenses, Certifications, and Memberships Required

- Willingness to become a Public Notary and to perform all related duties and functions.

CONTACTS: INTERNAL/EXTERNAL

- Daily contact with patrons and staff.
- Frequent contact with visitors and callers.

SUPPLEMENTAL INFORMATION

Working Environment: *The work environment characteristics described herein are representative of those an employee encounters while performing the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.*

- The work will occur primarily at The Urbana Free Library.
- Occasionally, staff perform outreach at offsite locations.
- Typical work schedule could include any hours that the Library is open in addition to time before and afterwards, with flexibility depending on the needs of the department.

Physical Strength and Agility:

Physical strength and agility sufficient to perform assigned tasks:

- While performing the duties of this job, the employee is frequently required to walk, sit, and talk or hear.
- The employee is occasionally required to use hands to handle, feel, or operate objects, tools, or controls; and reach with hands and arms.
- The employee is occasionally required to climb or balance; stoop, kneel, crouch, or crawl.

- The employee must occasionally lift and/or move up to 25 pounds.
- Vision: See in the normal visual range with or without correction; vision sufficient to read computer screens and printed documents; visually inspect work in progress; and the ability to adjust focus to both print and electronic text.
- Hearing: Hear in the normal audio range with or without correction.
- Other: Lifting, pushing, and keyboarding.

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Disparate Impact Analysis

(an On-Line Internet based application)

Instructions: Please fill out the information into the form below. Once you have entered your data below, you may select the types of analysis to be conducted by checking the appropriate boxes. Then press the compute button at the bottom of the form to view the results.

Select the type of employment decision: ▾

Enter a title for your report:

Sex

Number of Male
 Applicants
 Selected

Race

Number of Non-Minority
 Applicants
 Selected

Age

Number of Younger
 Applicants
 Selected

Disability

Number of Non-Disabled
 Applicants
 Selected

Number of Female
 Applicants
 Selected

Number of Minority
 Applicants
 Selected

Number of Older
 Applicants
 Selected

Number of Disabled
 Applicants
 Selected

<input checked="" type="checkbox"/> -Adverse Impact <input checked="" type="checkbox"/> -Chi-Square <input checked="" type="checkbox"/> -Standard Deviation <input checked="" type="checkbox"/> -Confidence Intervals <input checked="" type="checkbox"/> Probability Distribution	Select the Statistical Tests you wish to execute by checking or unchecking the boxes on the left. Then press the 'Compute' button below. <input type="button" value="Compute"/>
Display: <input checked="" type="checkbox"/> Description of Statistic <input checked="" type="checkbox"/> Interpretation of Results	

Circulation Clerk/Information Assistant

Adverse-Impact Report

Adverse Impact and the "four-fifths rule." - A selection rate for any race, sex, or ethnic group which is less than four-fifths (4/5ths) (or eighty percent) of the rate for the group with the highest rate will generally be regarded by the Federal enforcement agencies as evidence of adverse impact. Uniform Guidelines on Employee Selection Procedures

Rate of Female Applicants Selected	Rate of Male Applicants Selected	Adverse Impact Ratio for Female	Adverse Impact Ratio for Male
(67/85) = 0.7882	(33/45) = 0.7333	(0.7882/0.7333)=1.07	(0.7333/0.7882)=0.93
Adverse impact as defined by the 4/5ths rule was not found in the above data.			

Rate of Minority Applicants Selected	Rate of NonMinority Applicants Selected	Adverse Impact Ratio for Minority	Adverse Impact Ratio for NonMinority
(24/36) = 0.6667	(74/93) = 0.7957	(0.6667/0.7957)=0.84	(0.7957/0.6667)=1.19
Adverse impact as defined by the 4/5ths rule was not found in the above data.			

Chi-Square Report

Observed Expected	Selected	Not Selected	Row Totals
Male	33 34.6154	12 10.3846	45
Female	67 65.3846	18 19.6154	85
Column Total	100	30	130
Chi-Square = 0.4996			
The value of the statistic is less than 3.841. This indicates that there is a 95 percent chance that these results have been obtained absent any form of bias. Therefore, you may conclude that these results fall within normal random variations and are not the result of bias.			

Observed Expected	Selected	Not Selected	Row Totals
NonMinority	74 70.6512	19 22.3488	93
Minority	24 27.3488	12 8.6512	36
Column Total	98	31	129
Chi-Square = 2.3669			
The value of the statistic is less than 3.841. This indicates that there is a 95 percent chance that these results have been obtained absent any form of bias. Therefore, you may conclude that these results fall within normal random variations and are not the result of bias.			

Standard-Deviation Report

The difference between the proportion of the protected class Selected and the proportion of all Applicants Selected has a normal distribution with a mean and standard deviation. The statistic is shown below:

$$\frac{(r / n) - p}{\sqrt{p * (1-p) / n} * \sqrt{1-q}}$$

Analysis of proportion of Female Selected where:

- r = number of Female Selected.
- n = number of Selected (Female and Male).
- p = proportion of Applicants that are Female.
- q = proportion of Applicants Selected.

	Selected	Not Selected	Row Totals
Male	33	12	45
Female	67	18	85
Column Total	100	30	130

r = 67
 n = 100
 p = 85 / 130 = 0.654
 q = (67 + 33) / (85 + 45) = 0.769

Standard Deviation Statistic = 0.707

These results show that the proportion of Female Selected is 0.707 standard deviations above the proportion of Applicants Selected. A result of less than 2 standard deviations is generally considered non-significant.

Analysis of proportion of Minority Selected where:

- r = number of Minority Selected.
- n = number of Selected (Minority and NonMinority).
- p = proportion of Applicants that are Minority.
- q = proportion of Applicants Selected.

	Selected	Not Selected	Row Totals
NonMinority	74	19	93
Minority	24	12	36
Column Total	98	31	129

r = 24
 n = 98
 p = 36 / 129 = 0.279
 q = (24 + 74) / (36 + 93) = 0.76

Standard Deviation Statistic = -1.538

These results show that the proportion of Minority Selected is -1.538 standard deviations below the proportion of Applicants Selected. A result of less than 2 standard deviations is generally considered non-significant.

Confidence Interval Report

The proportion of the protected class Selected has an expected value that would fall within a specified confidence interval. The statistic is shown below:

Observed value = (r / n)

Expected value = p

Standard Deviation = $\sqrt{p * (1-p) / n} * \sqrt{1-q}$

Confidence Interval:

Lower Bound = $p - 1.96 * \text{Std Dev}$

Upper Bound = $p + 1.96 * \text{Std Dev}$

*Analysis of proportion of Female Applicants Selected*where:

- **r = number of Female Selected.**
- **n = number of Applicants Selected.**
- **p = proportion of Female among those Selected.**
- **q = proportion of Applicants Selected.**

$r = 67$

$n = 100$

$p = (85/(85+45))=0.654$

$q = ((67 + 33)/(85 + 45))=0.769$

$(r/n)=67/100=0.67$

The lower bound of the confidence interval is: $0.654-(1.96*0.023)=0.6091$

The upper bound of the confidence interval is: $0.654+(1.96*0.023)=0.6986$

Confidence Interval = 0.6091 to 0.6986

These results show that the proportion of Female Female ($r/n=0.67$) is contained in the confidence interval. Therefore a finding of disparate impact is not supported by this data.

*Analysis of proportion of Minority Applicants Selected*where:

- **r = number of Minority Selected.**
- **n = number of Applicants Selected.**
- **p = proportion of Minority among those Selected.**
- **q = proportion of Applicants Selected.**

$r = 24$

$n = 98$

$p = (36/(36+93))=0.279$

$q = ((24 + 74)/(36 + 93))=0.76$

$(r/n)=24/98=0.2449$

The lower bound of the confidence interval is: $0.279-(1.96*0.022)=0.2355$

The upper bound of the confidence interval is: $0.279+(1.96*0.022)=0.3226$

Confidence Interval = 0.2355 to 0.3226

These results show that the proportion of Minority Minority ($r/n=0.2449$) is contained in the confidence interval. Therefore a finding of disparate impact is not supported by this data.

Probability Distribution Report

Number Female Selected	Number Male Selected	Rate of Female Applicants Selected	Rate of Male Applicants Selected	Adverse Impact Ratio of Female	Adverse Impact against Female ?	Probability	Cumulative Probability
55	45	(55/85)	(45/45)	0.6471	YES	0	0
56	44	(56/85)	(44/45)	0.6738	YES	0.000008	0.000008
57	43	(57/85)	(43/45)	0.7018	YES	0.000086	0.000094
58	42	(58/85)	(42/45)	0.7311	YES	0.000598	0.000692
59	41	(59/85)	(41/45)	0.7618	YES	0.002873	0.003565
60	40	(60/85)	(40/45)	0.7941	YES	0.010208	0.013773
61	39	(61/85)	(39/45)	0.8281	NO	0.027891	0.041664
62	38	(62/85)	(38/45)	0.8638	NO	0.060151	0.101815
63	37	(63/85)	(37/45)	0.9014	NO	0.10431	0.206124
64	36	(64/85)	(36/45)	0.9412	NO	0.14741	0.353534
65	35	(65/85)	(35/45)	0.9832	NO	0.171449	0.524983
66	34	(66/85)	(34/45)	1.0277	NO	0.165309	0.690292
Selected->67	33	(67/85)	(33/45)	1.0749	NO	0.132823	0.823115
68	32	(68/85)	(32/45)	1.125	NO	0.08925	0.912364
69	31	(69/85)	(31/45)	1.1784	NO	0.050261	0.962625
70	30	(70/85)	(30/45)	1.2353	NO	0.023742	0.986367
71	29	(71/85)	(29/45)	1.2961	NO	0.009405	0.995772
72	28	(72/85)	(28/45)	1.3613	NO	0.00312	0.998892
73	27	(73/85)	(27/45)	1.4314	NO	0.000864	0.999756
74	26	(74/85)	(26/45)	1.5068	NO	0.000199	0.999955
75	25	(75/85)	(25/45)	1.5882	NO	0.000038	0.999993
76	24	(76/85)	(24/45)	1.6765	NO	0.000006	0.999999
77	23	(77/85)	(23/45)	1.7724	NO	0.000001	1
78	22	(78/85)	(22/45)	1.877	NO	0	1
79	21	(79/85)	(21/45)	1.9916	NO	0	1
80	20	(80/85)	(20/45)	2.1176	NO	0	1
81	19	(81/85)	(19/45)	2.257	NO	0	1
82	18	(82/85)	(18/45)	2.4118	NO	0	1
83	17	(83/85)	(17/45)	2.5848	NO	0	1
84	16	(84/85)	(16/45)	2.7794	NO	0	1
85	15	(85/85)	(15/45)	3	NO	0	1

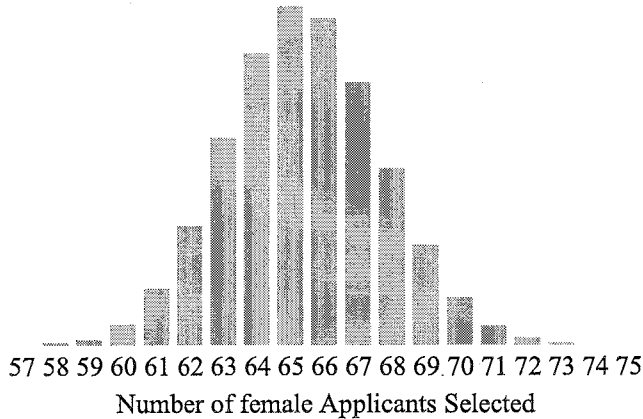
Given that 100 were Selected from a pool of 45 Male and 85 Female it was possible to have Selected from 55 to 85 females.

Adverse Impact would be found if you Selected 60 or fewer Female.

The probability of Adverse Impact occurring even if the employment decisions were random (i.e. unbiased) is 0.0138 (the sum of the probabilities of having Selected 60 or fewer Female).

Since the probability of Adverse Impact occurring even if the selection was random (i.e. unbiased) is less than 10%, an observed Adverse Impact may be significant since there is a low probability that Adverse Impact would have occurred by chance.

Probability Distribution of the variable: Number of Female Selected.

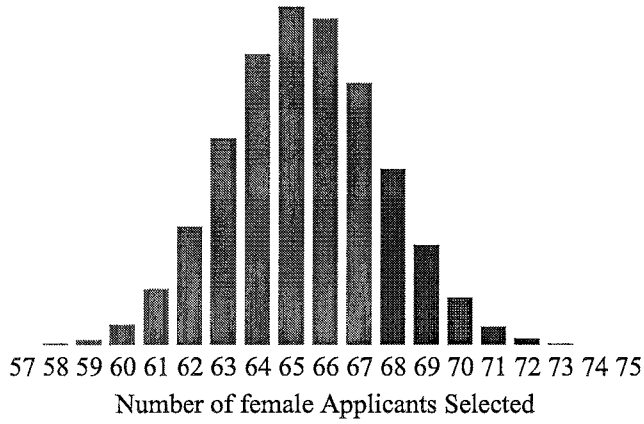


The probability distribution of having Selected from 55 to 85 females is displayed above. The graph above is shown starting with 57 since the probabilities below this point are near zero. As can be seen, the most likely event (highest probability) to have occurred by chance (or decisions not affected by any form of bias) is to have Selected 65 female Applicants. This represents the mean of the probability distribution. Approximately half of the probability distribution is above this point and approximately half is below this point. The total area contained in the probability distribution is equal to 1. Thus, probabilities for each number of female Applicants Selected are a fraction of the total probability distribution. The larger areas of the distribution represent higher probabilities of occurrence. Adding the individual probabilities up to a certain point enable you to compute the probability of having Selected that many or fewer females Applicants. Adding the individual probabilities from a certain point and higher enable you to compute the probability of having Selected that many or more females Applicants.

The characteristics of the probability distribution--its mean and standard deviation--are a function of the number of female and male Applicants and the number of Applicants to be Selected. Though it is possible to have Selected from 55 to 85 female Applicants, the individual probabilities of having Selected each number of female Applicants can be computed and accumulated. As noted before, these individual probabilities are a function of the number of female and male Applicants and the number of Applicants to be Selected.

Using the distribution above, a 90 percent confidence interval on the variable 'Number of Female Selected' would have a lower bound of 62 and an upper bound of 69.

The significance of having Selected 67 or fewer Female is graphically displayed below.



As noted earlier, Adverse Impact, according to the 4/5ths rule, would be found if you Selected 60 or fewer female Applicants.

You have Selected 67 female Applicants. The probability of having Selected 67 or fewer Female is equal to the cumulative probability for having Selected 67 Female Applicants. The cumulative probability of having Selected 67 female Applicants is 0.8231 and is graphically displayed, in red, above.

Since the probability is greater than 10%, we are unable to reject the hypothesis that the decisions occurred due to chance. Therefore, we must conclude that it is entirely possible that having Selected 67 or fewer female Applicants is an event that occurred due to chance and not from discriminatory actions by the employer.

Probability Distribution Report

Number Minority Selected	Number NonMinority Selected	Rate of Minority Applicants Selected	Rate of NonMinority Applicants Selected	Adverse Impact Ratio of Minority	Adverse Impact against Minority ?	Probability	Cumulative Probability
5	93	(5/36)	(93/93)	0.1389	YES	0	0
6	92	(6/36)	(92/93)	0.1685	YES	0	0
7	91	(7/36)	(91/93)	0.1987	YES	0	0
8	90	(8/36)	(90/93)	0.2296	YES	0	0
9	89	(9/36)	(89/93)	0.2612	YES	0	0
10	88	(10/36)	(88/93)	0.2936	YES	0	0
11	87	(11/36)	(87/93)	0.3266	YES	0	0
12	86	(12/36)	(86/93)	0.3605	YES	0	0
13	85	(13/36)	(85/93)	0.3951	YES	0	0
14	84	(14/36)	(84/93)	0.4306	YES	0	0
15	83	(15/36)	(83/93)	0.4669	YES	0	0
16	82	(16/36)	(82/93)	0.5041	YES	0.000001	0.000001
17	81	(17/36)	(81/93)	0.5422	YES	0.000006	0.000006
18	80	(18/36)	(80/93)	0.5813	YES	0.000037	0.000043
19	79	(19/36)	(79/93)	0.6213	YES	0.000199	0.000242
20	78	(20/36)	(78/93)	0.6624	YES	0.00089	0.001131
21	77	(21/36)	(77/93)	0.7045	YES	0.003304	0.004435
22	76	(22/36)	(76/93)	0.7478	YES	0.010204	0.014639
23	75	(23/36)	(75/93)	0.7922	YES	0.026224	0.040863
Selected->24	74	(24/36)	(74/93)	0.8378	NO	0.056071	0.096933
25	73	(25/36)	(73/93)	0.8847	NO	0.099582	0.196515
26	72	(26/36)	(72/93)	0.9329	NO	0.146454	0.342969
27	71	(27/36)	(71/93)	0.9824	NO	0.17752	0.520489
28	70	(28/36)	(70/93)	1.0333	NO	0.176142	0.696631
29	69	(29/36)	(69/93)	1.0857	NO	0.141723	0.838355
30	68	(30/36)	(68/93)	1.1397	NO	0.09127	0.929624
31	67	(31/36)	(67/93)	1.1953	NO	0.046201	0.975826
32	66	(32/36)	(66/93)	1.2525	NO	0.017914	0.993739
33	65	(33/36)	(65/93)	1.3115	NO	0.005118	0.998857
34	64	(34/36)	(64/93)	1.3724	NO	0.001012	0.99987
35	63	(35/36)	(63/93)	1.4352	NO	0.000123	0.999993
36	62	(36/36)	(62/93)	1.5	NO	0.000007	1

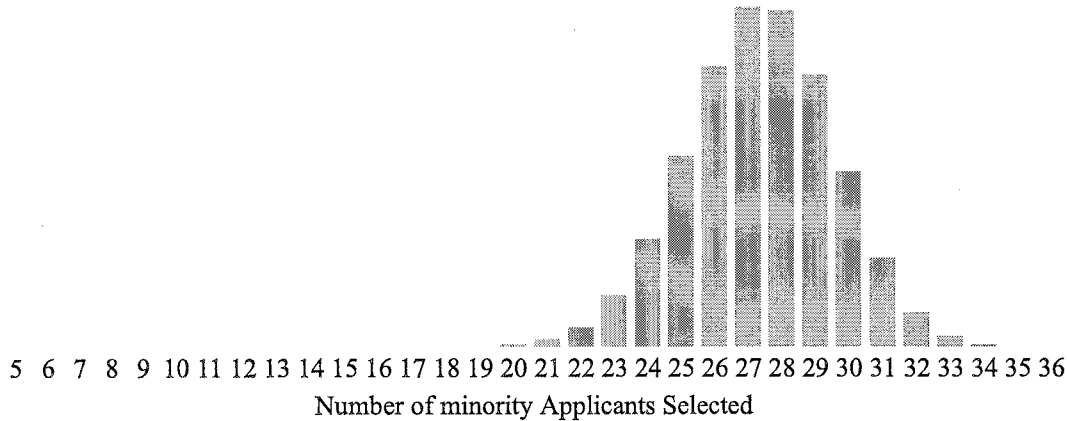
Given that 98 were Selected from a pool of 93 NonMinority and 36 Minority it was possible to have Selected from 5 to 36 minorities.

Adverse Impact would be found if you Selected 23 or fewer Minority.

The probability of Adverse Impact occurring even if the employment decisions were random (i.e. unbiased) is 0.0409 (the sum of the probabilities of having Selected 23 or fewer Minority).

Since the probability of Adverse Impact occurring even if the selection was random (i.e. unbiased) is less than 10%, an observed Adverse Impact may be significant since there is a low probability that Adverse Impact would have occurred by chance.

Probability Distribution of the variable: Number of Minority Selected.

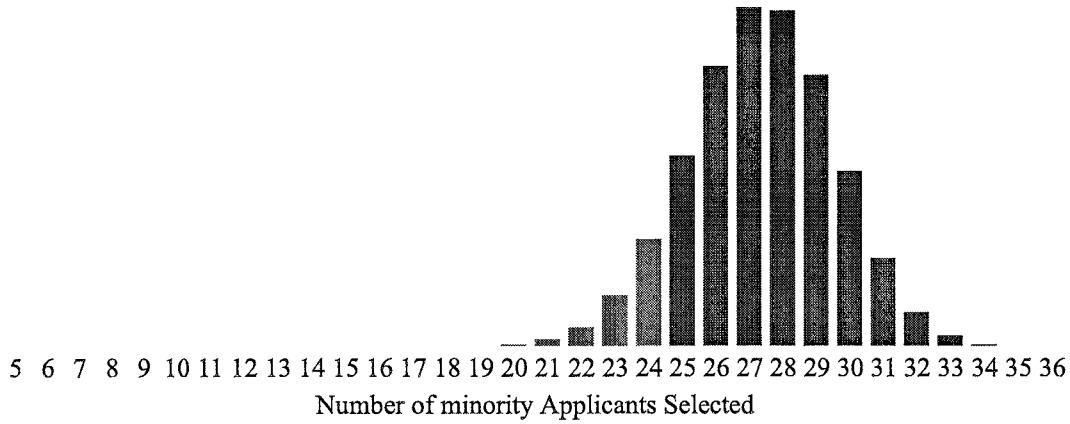


The probability distribution of having Selected from 5 to 36 minorities is displayed above. The graph above is shown starting with 5 since the probabilities below this point are near zero. As can be seen, the most likely event (highest probability) to have occurred by chance (or decisions not affected by any form of bias) is to have Selected 27 minority Applicants. This represents the mean of the probability distribution. Approximately half of the probability distribution is above this point and approximately half is below this point. The total area contained in the probability distribution is equal to 1. Thus, probabilities for each number of minority Applicants Selected are a fraction of the total probability distribution. The larger areas of the distribution represent higher probabilities of occurrence. Adding the individual probabilities up to a certain point enable you to compute the probability of having Selected that many or fewer minorities Applicants. Adding the individual probabilities from a certain point and higher enable you to compute the probability of having Selected that many or more minorities Applicants.

The characteristics of the probability distribution--its mean and standard deviation--are a function of the number of minority and non-minority Applicants and the number of Applicants to be Selected. Though it is possible to have Selected from 5 to 36 minority Applicants, the individual probabilities of having Selected each number of minority Applicants can be computed and accumulated. As noted before, these individual probabilities are a function of the number of minority and non-minority Applicants and the number of Applicants to be Selected.

Using the distribution above, a 90 percent confidence interval on the variable 'Number of Minority Selected' would have a lower bound of 24 and an upper bound of 31.

The significance of having Selected 24 or fewer Minority is graphically displayed below.



As noted earlier, Adverse Impact, according to the 4/5ths rule, would be found if you Selected 23 or fewer minority Applicants.

You have Selected 24 minority Applicants. The probability of having Selected 24 or fewer Minority is equal to the cumulative probability for having Selected 24 Minority Applicants. The cumulative probability of having Selected 24 minority Applicants is 0.0969 and is graphically displayed, in red, above.

Since the probability is less than 10%, we must reject the hypothesis that the decisions occurred due to chance. Therefore, we must conclude that the result 24 minority Applicants were Selected does not support (based on statistics) a finding of Adverse Impact.

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