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Personality traits of contact lens wearers versus spectacle lens wearers

Abstract

Previous reports on the personality of contact lens wearers and spectacle wearers have been often vague and inconclusive. The present study was designed to determine if there are indeed significant differences in personality traits between contact lens wearers and spectacle wearers. The subjects of the present study were two groups of 90 optometry students at Pacific University. One group of subjects was primary contact lens wearers while the other group was primary spectacle wearers. The personality traits of each subject were assessed using the Myers-Briggs Type Indicator (MBTI), a self-administered psychometric questionnaire. The results indicated that there were no significant differences in personality traits between the two groups. However, there were some trends which might nave shown significant if a larger number of subjects was used. Although the present study did not find significant differences between contact lens wearers and spectacle wearers, the results could assist practitioners during case presentation of eye wear options.

Degree Type Thesis

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Committee Chair Nira Levine, Ed.D.

Subject Categories Optometry

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Personality Traits of Contact Lens Wearers Versus Spectacle Lens Wearers

by

Tracy Le Edward Lee Class of 1991

A thesis submitted to the faculty of the College of Optometry Pacific University Forest Grove, Oregon in partial fulfillment for the degree of Doctor of Optometry March, 1991 Signatures:

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Tracy Le

Edward Lee

Edward Lee

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Nira Levine, Ed. D., Faculty Advisor

We would like to thank our advisor, Dr. Nira Levine, for her suggestions and patience during the course of this project.

Abstract

Previous reports on the personality of contact lens wearers and spectacle wearers have been often vague and inconclusive. The present study was designed to determine if there are indeed significant differences in personality traits between contact lens wearers and spectacle wearers. The subjects of the present study were two groups of 90 optometry students at Pacific University. One group of subjects was primary contact lens wearers while the other group was primary spectacle wearers. The personality traits of each subject were assessed using the Myers-Briggs Type Indicator (MBTI), a self-administered psychometric questionnaire. The results indicated that there were no significant differences in personality traits between the two groups. However, there were some trends which might have shown significant if a larger number of subjects was used. Although the present study did not find significant differences between contact lens wearers and spectacle wearers, the results could assist practitioners during case presentation of eye wear options.

Personality Traits of Contact Lens Wearers Versus Spectacle Lens Wearers Tracy Le and Edward Lee

Optometrists often state that the personality traits of patients who seek contact lenses differ somewhat from those who request spectacles. However, a few researchers^{2,3} have investigated the personality trait differences between contact lens wearers and spectacle wearers and the results of their studies are very inconclusive. Over the years personality studies on contact lens wearers and spectacle wearers have generated very little interest in the optometric field.

In 1960, Beiman and Blumenthal⁺ compared the contact lens patients with a sample of the general population. The authors used the Minnesota Multiphasic Personality Inventory (MMPI) to determine whether there are any personality traits unique to the contact lens wearers. Their results indicated that contact lens wearers are very similar to the average person on the street. However, Wiener³ found that there seems to be some differences in personality traits between contact lens wearers and spectacle wearers. In his study, the Cornell Index Form N2, a test which was extensively used in the Armed Forces to screen out neuropsychiatric and psychosomatic recruits, was administered to both 100 people requesting contact lenses and 100 people requesting regular spectacles and the results of the tests of both groups were compared and analyzed. The major conclusion was

that people requesting contact lenses seem to have more serious neuropsychiatric and psychosomatic disturbances than do people requesting spectacles. About 10 years later, Harris and Messinger² used the Adjective Check List and concluded that the personality traits of contact lens wearers do not differ significantly from those of spectacle wearers.

Knoll⁴, in his review article, stated that the main reason for different results in these two studies was the nature of the tests.

The present study was designed to determine if there are significant differences in personality traits between contact lens wearers and spectacle wearers utilizing the Myers-Briggs Type Indicator (METI). The METI, a psychometric questionnaire, was used to assess the personality characteristics of each subject. The hypothesis of this study was that two groups would differ in personality traits.

The MBTI is based on years of observing people by Carl Jung and by Myers and her mother Briggs. The Indicator was developed with great care and would become the most widely-used personality measure for non-psychiatric populations. The MBTI is used in many settings; it is often administered in school in order to make learning more interesting and efficient for teachers and students; it can be used to help students to choose careers that are likely to hold their interest; it is used in marital counseling; it is used in work settings to help alleviate discord in the work environment, etc.

The MBTI is a self-administered personality test that forces a person to make choices on four preferences indicated by eight letters: Extraversion (E) or Introversion (I), Sensing (S) or Intuitive (N), Thinking (T) or Feeling (F) and Judging (J) or perceptive (P).

Description of eight MBTI personalty preferences. 3,5,6

Attitude stance in relation to the world

Extraversion (E)
. The outside world captures attention, oriented to "outside
objects".
. Expansive and less impassioned, propagate rather than
conserve
. Get along with others easily, comfortable with new groups

Introversion (I)
 .The inner world is the world of most important activity
 .Intense and passionate, tends to control personal disclosure
 and interaction
 .Prefers one-to-one or small group situations

Attitude way of dealing with the world

Judging (J) .More decisive than curious .Is interest in essentials only .Live according to plans, standards, and customs

Perceiving (P) .More curious than decisive .Never has enough information .Live according to the situation of the moment

> Perception process of gathering information/data

Sensing (S)

.Like an established routine .Face life observantly and is realistic .Perceives in terms of specifics

The basic assumption in the MBTI is that every person uses all eight of the qualities described by these letters but given a choice one's basic preference would select one trait more often than the opposite trait of a particular scale.

METHOD

Subjects

Ninety optometry students at Pacific University served as voluntary participants. Of these subjects, 50 students were primary spectacle wearers (31 men and 19 women) and 40 were primary contact lens wearers (16 men and 24 women). Materials

The present authors chose the Myers-Briggs Type Indicator (METI) to assess personality differences because the METI may be the simplest method of determining a person's personality preference.

A questionnaire was constructed in order to obtain

biographical information about subjects and to differentiate contact lens wearers from spectacle wearers. Students were asked to indicate their sex, refractive error, and their reasoning for wearing contact lenses (See Appendix A).

Design and Procedures

The Myers-Briggs Type Indicator (MBTI) was administered during the school orientation for entering first year students. Therefore, students' data were readily available in the files of the Director of Student Services. The present authors distributed the informed release form along with the questionnaire to optometry students' mailboxes and received responses from 122 students. Of 122 responding students, 50 were primary spectacle wearers and another 40 were primary contact lens wearers. The remaining 32 were emmetropes or those who wear both contact lenses and spectacles about equal amount of time. The present authors decided not to include these 32 subjects in this study.

Ninety subjects' MBTI data were sent directly to the Center for Applications of Psychological Types in Gainesville, Florida for statistical analysis. The data were analyzed using the Chi Square method of comparing the distribution of the scores of the two groups.

RESULTS

Table 1 compares the personality traits of the contact lens wearers with the spectacle wearers.

	Total C N=90	Foup	Total Weare	Spectacle rs N=50	Total Lens N=	Contact wearers 40
	percent	2	per	cent	perce	nt
Extroversion	53		1	56	50	
Introversion	47			44	50	
Sensing	59			62	55	
Intuitive	41			38	45	
Thinking	51			58	43	
Feeling	49			42	57	
Judging	74		ł	30	68	
Perceiving	26			20	32	

Table 1. Comparison of personality types on the MBTI of spectacle and contact lens wearers

No significant differences were found in any of eight personality type indicators (See Appendix B, C, D, E, F, and G for complete data). The present study, however, showed some trends that can explain the personality traits of the two groups. In reviewing Table 1, it appears that the majority of the spectacle wearers are more likely to be Thinking types (58% Thinking vs. 42% Feeling) whereas the majority of the contact lens wearers have more Feeling types (57% Feeling vs. 43% Thinking). The majority of both the spectacle wearers (80% Judging vs. 20% Perceiving) and contact lens wearers (68% Judging vs. 32% Perceiving) are Judging types, but contact lens wearers appear to have more Perceiving types.

In comparing the male subjects with the female subjects in both groups, the Chi Square analysis indicated that there was no significant difference. However, it appears that the majority of the males (71% of male spectacle wearers and 56% of male contact lens wearers) are more Thinking types whereas the majority of the females (63% of female spectacle wearers and 67% of female contact lens wearers) are likely to be Feeling types (Table 2). Table 2. Comparison of male and female personality types on the MBTI of spectacle and contact lens wearers

	Male		Fema	le	
	Spectacle Wearers N=31	Contact Lens Wearers N=16	Spectacle Wearers N=19	Contact Lens Wearers N=24	
Extroversion	percent 61	percent 63	percent 47	percent 42	
Introversion	39	37	53	58	
Sensing	58	63	68	50	
Intuitive	42	37	32	50	
Thinking	71	56	37	33	
Feeling	29	44	63	67	
Judging	81	75	79	62	
Perceiving	19	25	21	38	

Combinations of two personality traits were analyzed with the Chi Square method too. The results showed that the SJ (sensing plus judging) and ES (Extroversion plus sensing) type were significant at the .05 level in both groups of contact lens wearers and spectacle wearers. Table 3 shows that spectacle wearers have more SJ and ES preference than contact lens wearers (56% vs 35% and 34% vs 20% respectively). Although the TJ (thinking plus judging) preference was not statistically significant, there was the trend that spectacle lens wearers are more likely to be the TJ people than contact lens wearers (50% vs 35%).

Table 3. Comparison of the combinations of personality types on the MBTI of spectacle and contact lens wearers.

**************************************	Spe	ectacle Wea	rers	Contact Lens Wear				
	Male N=31	Female N=19	Total N=50	Male N=16	Female N=24	Total N=40		
	percent	percent	percent	percent	percent	percent		
Introversion+Judging	35	42	38	31	42	38		
Introversion+Perceiving	3	11	б	6	17	13		
Extroversion+Perceiving	16	11	14	19	21	20		
Extroversion+Judging	45	37	42	44	21	30		
Sensing+Thinking	45	32	40	38	13	23		
Sensing+Feeling	12	37	22	25	38	33		
Intuitive+Feeling	16	26	20	19	29	25		

	Specta	acle Weare	rs	Conta	ct Lens We	earers
Intuitive+Thinking	25	5	18	19	21	20
Sensing+Judging	52	63	56*	38	33	35*
Sensing+Perceiving	6	5	6	25	17	20
Intuitive+Perceiving	13	16	14	0	21	12
Intuitive+Judging	29	16	24	38	29	33
Thinking+Judging	61	32	50	44	29	35
Thinking+Perceiving	10	5	8	13	4	8
Feeling+Perceiving	10	16	12	13	33	25
Feeling+Judging	19	47	30	31	33	33
Introversion+Intuitive	13	21	16	13	17	15
Extroversion+Intuitive	29	11	22	25	33	30
Introversion+Sensing	26	32	28	25	42	35
Extroversion+Sensing	32	37	34*	38	8	20*

* implies significance at the .05 level.

The subjects were asked the reasons for wearing contact lenses in the questionnaire . The most significant finding was that about one third of the subjects (31.5%) would wear contact lenses for cosmetic reasons. The other reasons were as follows:

annoyed with discomfort from wearing glasses (23.5%); to be used in sports (16.5%); improved visual acuity (16.0%); does not like glasses (12.5%).

DISCUSSION

This study has shown that the personality characteristics of contact lens wearers do not differ significantly from those of spectacle wearers as measured by the MBTI. However, the results indicated that significant difference in personality traits between two groups might have shown if a larger sample was used. Also, the subjects of the present study were optometry students only and this biased sampling might have influenced the result in some way.

Although there were these shortcomings, the present study showed some trends in personality characteristics of both contact lens wearers and spectacle wearers. According to the theory upon which the MBTI is constructed, there are two basic mental processes: perception and judgment (Schemel and Borbely, 1982)⁷. Perception is the process of becoming aware of things and ideas. Judgment is the process by which people come to conclusions about what has been perceived. The process of perception is accomplished at any given time by the Function of Sensing or the Function of Intuition. Meanwhile, the process of judgment is accomplished by the use of either Thinking or Feeling.

The results of this study seem to indicate that contact lens wearers prefer Intuition and Feeling type whereas spectacle wearers prefer Sensing and Thinking type. In other words, contact lens wearers are oriented to change, innovation; they like variety, challenge; they would like to learn new skills rather than use skills already learned (Intuition). Also, contact lens wearers tend to be very aware of other people and their feelings; they relate well to most people; like harmony (Feeling). In contrast, spectacle wearers are more detail oriented, realistic, and tolerant of routine (Sensing). Furthermore, they are relatively unemotional and uninterested in people's feeling; they like analysis and putting things into logical order; they have a principal concern for "truth" (Thinking).

Furthermore, contact lens wearers and spectacle wearers seem to be different in the way of dealing with the outside world. Most spectacle wearers (80%) are Judgmental types, interested only in essentials; they like schedules and working according to plan; they like to get things settled and wrapped up. The majority of contact lens wearers (68%) are also Judgmental types but they are more likely to be Perceiving types who tend to be more adaptable to changes; they have a tolerance for ambiguity; they prefer openness to what may come.

The difference between the male subjects and female subjects in personality traits was not statistically significant. However, it appears that males and females differ on the process by which they come to conclusion on the data perceived. Males come to closure using well established principles, with attention to cause and effect. Males value what is true and fairness very

highly (Thinking). In contrast, females come to conclusion using feelings, with past experience. Females value what is good and harmony is also very important to them (Feeling).

CONCLUSION

The Myers-Briggs Type Indicator (MBTI) was a tool in assessing the personality traits of contact lens wearers and spectacle wearers. The MBTI can yield a wide range of information about a person's personality and can be scored and analyzed rather easily. Although the present study did not find any statistically significant differences between the two groups, some trends could be observed. Spectacle wearers appear to value logic above sentiment and to be impersonal, being more interested in things than human relationship. They also like to have matters decided so that they can expect what is going to happen and can plan for it and can be prepared for it. In contrast, contact lens wearers seem to value sentiment above logic and to be highly personal. They are more curious than decisive, adaptable to changes, and like to start something new.

The significance of the present study was that the results could assist practitioners during case presentation of eye wear options. For example, since wearing contact lenses require frequent visits for progressive evaluation and sometimes modification of the lenses, the Feeling and Perceiving type patients are better suited for contact lens wear. The Thinking and Judging type patients would be discouraged by these highly personal situations and unpredictability, and it could increase a chance of failure in wearing contact lenses.

Recognizing the personality factors influence satisfaction with the choices made for, eye wear selection can make the optometrist sensitive to the patient's needs; the optometrist can address the dissatisfied contact lens wearer with the possible reasons for the dissatisfaction and thus reduce the tension or annoyance which may require frequent office return. Further study should be directed at retesting the hypothesis of the present study with a large number of subjects and diverse population.

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Appendix A

A questionnaire which was constructed in order to obtain subjects' biographical information and to differentiate contact lens wearers from spectacle wearers

- 1. Class _____
- 2. Sex _____
- 3. Refractive Error (Please check one)
 - ____ Myope
 - ____ Hyperope ____ Emmetrope
 - ____ Innie er op e
- Are you a <u>primary</u> contact lens wearer or spectacle wearer? (Primary means whether you wear one of these for most of the time during waking hours.)
 - ____ Contact lens wearer
 - ____ Spectacle wearer
 - ____ Wear both contact lenses and spectacles about equal amount of time

- 5. If you wear contact lenses, what is your reasoning for wearing them? (choose one)
 - ____ Improved appearance
 - ____ Annoyed with discomfort from wearing glasses
 - ____ Don't like glasses
 - ____ To be used in sports

____ Improved VA other _____

Appendix B, C, D, E, F, and G

Statistical analysis of ninety subjects' MBTI data

Search Edit View Actions Options OCLC: NEW Rec stat: 13 19920217 Replaced: 19920217 Used: 19920217 Entered: Bib lvl: m Source: d Type: a Lang: eng Repr: Enc lyl: 1 Conf pub: 0 Ctry: xx Mod rec: Govt pub: Indx: 0 Cont: b Desc: a Int lyl: Festschr: 0 Illus: 10 F/B: Dat tp: s Dates: 1991, 1 040 IC OPU 2 090 RE956.P42 15 L4 1991 3 090 RE956, P42 4 049 OPUM 1c 1 [35369000099463] 1a [ARCHIVES] OPUM 1c 1 353690000994551 to elb 5 100 10 Le, Tracy. 6 245 10 Personality traits of contact lens wearers versus spectacle lens vearers / Ic by Tracy Le, Edward Lee 7 260 IC 1991. 8 300 IV, 16 leaves ; 1c 28 cm. 9 502 Thesis (O.D.)--Pacific University, 1991. 10 504 Includes Bibliographical references (leaf 14) 11 650 O Myers-Briggs Type Indicator. 700 10 Lee, Edward S. 12

SOURCE OF DATA:	GROUP TABULATED	MBTI TYPE TABLE CENTER FOR APPLICATIONS
Freshmen Optometry	Total Excebsor	OF PSYCHOLOGICAL TYPE
Nira R. Levine, Ed.D. Pacific University	Wearing Spectacles	LEGEND: % = PERCENT OF TOTAL CHOOSING THIS GROUP
Data collected 1976 - 1990 Tables created 05/11/90		WHO FALL INTO THIS TYPE. I = SELFSELECTION INDEX;
	N= 50	RATIO OF PERCENT OF TYPE IN GROUP TO & IN SAMPLE

	SENSI WITH	NG TYPES WITH	INTUITI WITH FEELING	VE TYPES WITH			N	8	I
1000	I T S T J	I T S F J	I T N F J	I T N T J	īī	E	28	56.00	1.05
					D	S	31	62.00	1.05
	N= 10	N= 4	N= 3	N= 2	GI	N	19	38.00	.92
	\$=20.00	%= 8.00	8= 6.00	8= 4.00	N I G N	T F	29 21	58.00 42.00	1.13 .86
100	I= 1.20	I= ,72	I= 1.35	I= .72		J P	40 10	80.00	1.07
1.1	ISTP	ISFP	INFP	INTP	E R	IJ	19	38.00	1.01
	N= 0	N= 0	N= 1	N= 2	T	FP	7	14 00	.07
	% = 0.00	%= 0.00	% = 2.00	%= 4.00	P	ĒJ	21	42.00	1.15
	I= 0.00	I= 0.00	I= .90	I= 1.20	RC	ST SF	20 11	40.00 22.00	1.24 .82
	ESTP	ESFP	ENFP	ENTP	P	NF NT	10 9	20.00 18.00	.90 .95
	N= 1	N= 2	N= 3	N= 1		SJ SP	28 3	56.00	1.20" .49
	%= 2.00 I= .60	¥= 4.00 I= .72	¥= 6.00 I= .90	¥= 2.00 I= 1.80	SEX	NP NJ	7 12	14.00 24.00	1.05
1. 121.012	ESTJ	 E S F J	 E N F J	 E N T J		TJ TP	25 4	50.00 8.00	1.15 1.03
	N= 9	N= 5	N= 3	N= 4	D R G T	FP FJ	6 15	12.00 30-00	.67 .96
	%=18.00	%=10.00	%= 6.00	%= 8.00	IS N G	IN EN	8 11	16.00 22.00	1.03
	I= 1.47	I= 1.50	I= .67	¹ = .90	1	IS ES	14	28.00	.90

NOTE CONCERNING SYMBOLS FOLLOWING THE SELECTION RATIOS: " IMPLIES SIGNIFICANCE AT THE .05 LEVEL, I.E., CHI SQ. > 3.8; # IMPLIES SIGNIFICANCE AT THE .01 LEVEL, I.E., CHI SQ. > 6.6; * IMPLIES SIGNIFICANCE AT THE .001 LEVEL, I.E., CHI SQ. > 10.8. (UNDERSCORE) INDICATES FISHER'S EXACT PROBABILITY USED INSTEAD OF CHI-SQUARE.

BASE POPULATION USED IN CALCULATING SELECTION RATIO: Total Freshmen Using Eyewear BASE TOTAL N = 90. SAMPLE AND BASE ARE DEPENDENT.

* * * * CALCULATED VALUES OF CHI SQUARE OR FISHER'S EXACT PROBABILITY * * * *

	TYPE TAB	LE ORDER		E	.32	IJ	.00	SJ	3.94	IN	.02
.40	.33	.63	.65	s	. 45	ĒP	1 38	NP	1.00	IS	.51
*****	.08	1.00	1.00	N	.45	ST	3 12	TI	2 04	20	2.11
. 58	.65	1.00	1.00	T	2.14	SF	1.25	TP	1.00		
10	. 22	.46	1.00	r	1 02	NT	.06	FJ	.06		
				JP	1 83						

B

SOURCE OF DATA:

GROUP TABULATED:

Freshmen Optometry Students Using Eyewear Nira R. Levine, Ed.D. Pacific University Data collected 1976 - 1990 Tables created 05/11/90

Male Freshmen Wearing Spectacles

N- 31

MBTI TYPE TABLE CENTER FOR APPLICATIONS OF PSYCHOLOGICAL TYPE

LEGEND: S - PERCENT OF TOTAL CHOOSING THIS GROUP WHO FALL INTO THIS TYPE. I - SELFSELECTION INDEX; RATIO OF PERCENT OF TYPE IN GROUP TO S IN SAMPLE.

SENSI WITH THINKING	NG TYPES WITH FEELING	INTUITI WITH FEELING	VE TYPES WITH THINKING		N	8	I
ISTJ	ISFJ	INFJ	INTJ	J I	19 12	61.29 38.71	1.01
N- 7	N- 1	N- 1	N= 2	D S G N	18 13	58.06 41.94	.97
8-22.58	\$= 3.23	8= 3.23-	8= 6.45	NI T GN F	22	70.97	1.08
I= 1.18	I= .76	I= .76	I= 1.01	T R J	25	80.65	1.02
ISTP	ISFP	INFP	INTP		6 11	19.35	.91
N= 0	N= 0	N= 0	N- 1	R ÎP T	-î	3.23	.76
\$= 0.00	8= 0.00	8= 0.00	8= 3.23	P EJ	5 14	16.13 45.16	.95 1.01
I= 0.00	I= 0.00	I= 0.00	I= 1.52	R ST C SF	14	45.16 12.90	1.06
ESTP	ESFP	ENFP	ENTP	P NF T NT	5 8	16.13 25.81	.95
N= 1	N= 1	N= 2	N- 1	I V SJ	16	51.61	1.10
\$= 3.23	8= 3.23	8= 6.45	\$= 3.23	S E	2	0.45	
I= .51	I= .76	I= 1.52	I= 1.52	T NJ	49	12.90 29.03	1.52
ESTJ	ESFJ	ENFJ	ENTJ	J V TP	19 3	61.29 9.68	1.11 .91
N- 6	N= 2	N= 2	N= 4	DR FP GT FJ	36	9.68 19.35	.91 .83
\$=19.35	8= 6.45	8= 6.45	8=12.90	N IN	4	12.90	1.01
I= 1.14	I= 1.01	I= .76	I= 1.01	G EN	9	29.03	1.05
!				- ES	10	32.26	.95
NOTE CON #] *] _ (UNDERSCOP	NCERNING SYMB IMPLIES SIGNI IMPLIES SIGNI IMPLIES SIGNI RE) INDICATES	OLS FOLLOWIN FICANCE AT T FICANCE AT T FICANCE AT T FISHER'S EX	G THE SELECTI HE .05 LEVEL, HE .01 LEVEL, HE .001 LEVEL ACT PROBABILI	ON RATIOS: I.E., CHI I.E., CHI , I.E., CHI TY USED INS	SQ. > SQ. > I SQ. > STEAD (3.8; 6.6; > 10.8. DF CHI-:	SQUARE.

BASE POPULATION USED IN CALCULATING SELECTION RATIO: Male Freshmen Using Eyewear BASE TOTAL N = 47. SAMPLE AND BASE ARE DEPENDENT.

* * * CALCULATED VALUES OF CHI SQUARE OR FISHER'S EXACT PROBABILITY * * * * EI .00 IJ IP .84 TYPE TABLE ORDER 1.00 SJ 1.00 IN .00 SP ĒN 1.00 1.00 . 47 .28 1.00 1.00 1.00 EP 1.00 NP IS 1.00 ~ 00 ES .13

******	.34	*****	1.00	N	.09	EJ	.00	NJ	. 35	
				100		ST	.25	TJ	1.31	
.54	1.00	.54	1.00	т	1.02	SF	. 42	TP	1.00	
				F	1.02	NF	1.00	FP	1.00	
.70	1.00	.60	1.00		70	NT	73	FJ	.47	
				J	.12					

P

.72

SOURCE OF DATA:	GROUP	MBTI TYPE TABLE
	TABULATED:	CENTER FOR APPLICATIONS
Freshmen Optometry		OF PSYCHOLOGICAL TYPE
Students Using Eyewear	Female Freshmen	
Nira R. Levine, Ed.D.	Wearing Spectacles	LEGEND: 8 - PERCENT OF
Pacific University		TOTAL CHOOSING THIS GROUP
Data collected 1976 - 1990		WHO FALL INTO THIS TYPE.
Tables created 05/11/90		I = SELFSELECTION INDEX:
		RATIO OF PERCENT OF TYPE

N-19

IN GROUP TO & IN SAMPLE.

SENSI WITH THINKING	NG TYPES WITH FEFLING	INTUIT: WITH FEFLING	IVE TYPES WITH THINKING		N	8	I
ISTJ	ISFJ	INFJ	INTJ	JJ I	9 10	47.37 52.63	1.07
N- 3	N= 3	N= 2	N- 0	D S G N	13	68.42 31.58	1.18 -
8-15.79	8-15.79	8-10.53	%= 0.00	I NI T GN F	12	36.84	1.06
I= 1.13	I= .85	I= 2.26	I= 0.00	T R J	15	78.95	1.13
ISTP	ISFP	INFP	INTP		4 J 8	42.11-	1.01
N= 0	N- 0	N= 1	N= 1		P 2 P 2	10.53	- 75
8= 0.00	8- 0.00	8= 5.26	8= 5.26	PE	Ĵ Ť	36.84	1.32
I= 0.00	I= 0.00	I= 1.13	I= 1.13	R S C S	F 6 F 7	31.58 36.84	1.51
ESTP	ESFP	ENFP	ENTP	- E P N T N	F 5	26.32 5.26	.94
N= 0	N= 1	N= 1	N= 0	I V S E S	J 12 P 1	63.16	1.36
%= 0.00 I= 0.00	%= 5.26 I= .75	%= 5.26 I= .57	%= 0.00 I= 0.00	SE X N T N	P - 3 J 3	15.79	.85
- E S T J	E S F J	 ENFJ	 ENTJ	R A J V T	J 6 P 1	31.58 5.26	1.04
N- 3	N= 3	N= 1	N= 0	DR FI GT F.	P 3 J 9	15.79 47.37	.62 1.20
8-15.79	8=15.79	8= 5.26	%= 0.00	IS N II G EI	N 4 N 2	21.05 10.53	1.13
I= 2.26	I= 2.26	I= .57	I= 0.00		5 6 7	31.58	.85

NOTE CONCERNING SYMBOLS FOLLOWING THE SELECTION RATIOS: " IMPLIES SIGNIFICANCE AT THE .05 LEVEL, I.E., CHI SQ. > 3.8; # IMPLIES SIGNIFICANCE AT THE .01 LEVEL, I.E., CHI SQ. > 6.6; * IMPLIES SIGNIFICANCE AT THE .001 LEVEL, I.E., CHI SQ. > 10.8. (UNDERSCORE) INDICATES FISHER'S EXACT PROBABILITY USED INSTEAD OF CHI-SQUARE.

BASE POPULATION USED IN CALCULATING SELECTION RATIO: Female Freshmen Using Eyewear BASE TOTAL N = 43. SAMPLE AND BASE ARE DEPENDENT.

* * * CALCULATED VALUES OF CHI SQUARE OR FISHER'S EXACT PROBABILITY * * * *

	TYPE TAB	LE ORDE	R	E	.14	IJ	.00	SP	3.79	IN	1.00
1.00	.72	19	.50	~	1 40	ĒP	.44	NP	.72	IS	.46
****	. 50	1.00	1.00	N	1.48	EJ	31	ŊJ	.41	ES	03
*****	1.00	. 62	*****	т	.06	ST SF	15	TJ TP	.03		
08	08	62	50	F	.06	NF	1.00	FP	.29		
		-102		J	. 32		120	10			
				r	. 32						

D

SOURCE OF DATA:	GROUP TABULATED:	MBTI TYPE TABLE CENTER FOR APPLICATIONS					
Freshmen Optometry		OF PSYCHOLOGICAL TYPE					
Students Using Eyewear	Total Freshmen	The second s					
Nira R. Levine, Ed.D.	Wearing Contact	LEGEND: 8 - PERCENT OF					
Pacific University	Lenses	TOTAL CHOOSING THIS GROUP					
Data collected 1976 - 1990		WHO FALL INTO THIS TYPE.					
Tables created 05/11/90		I = SELFSELECTION INDEX:					

40 N=

RATIO OF PERCENT OF TYPE IN GROUP TO % IN SAMPLE.

SENSI	NG TYPES	INTUIT	IVE TYPES				-
WITH THINKING	FEELING	FEELING	THINKING		N	8	1
ISTJ	ISFJ	INFJ	INTJ	JJ I	20 20	50.00 50.00	1.07
N= 5	N= 6	N= 1	N= 3	D S G N	22 18	55.00 45.00	.93 1.09
8=12.50	8-15.00	\$= 2.50	8- 7.50	I NI T GN F	17	42.50	.83
I=75	I= 1.35	I= .56	I= 1.35		27	67.50	.91
ISTP	ISFP	INFP	INTP		15	37.50	.99
N- 0	N= 3	N- 1	N= 1	R IP T	-5	12.50	1.41
%= 0.00	\$= 7.50	8= 2.50	\$= 2.50	P EJ	- 12	20.00	1.20
I= 0.00	I= 2.25	I= 1.12	I= .75	R ST C SF	9 13	22.50 32.50	1.22
ESTP	ESFP	ENFP	ENTP	P NF T NT	10 8	25.00 20.00	1.12
N= 2	N= 3	N= 3	N- 0	I V SJ E SP	14	35.00	.75"
%= 5.00 I= 1.50	%= 7.50 I= 1.35	%= 7.50 I= 1.12	%= 0.00 I= 0.00	S E X NP T NJ	5 13	12.50	.94
 ESTJ	IESFJ	 E N F J	 E N T J	- R - A TJ JV TP	14	35.00	.81
N= 2	N- 1	N= 5	N= 4	UE DR FP GT FJ	10	25.00	1.41
8= 5.00	8= 2.50	\$=12.50	8-10.00	IS N IN G EN	6	15.00	.96
I= .41	I= .37	I= 1.41	I= 1.12	IS ES	14	35.00	1.12

NOTE CONCERNING SYMBOLS FOLLOWING THE SELECTION RATIOS: "IMPLIES SIGNIFICANCE AT THE .05 LEVEL, I.E., CHI SQ. > 3.8; # IMPLIES SIGNIFICANCE AT THE .01 LEVEL, I.E., CHI SQ. > 6.6; * IMPLIES SIGNIFICANCE AT THE .001 LEVEL, I.E., CHI SQ. > 10.8. (UNDERSCORE) INDICATES FISHER'S EXACT PROBABILITY USED INSTEAD OF CHI-SQUARE.

BASE POPULATION USED IN CALCULATING SELECTION RATIO: Total Freshmen Using Eyewear BASE TOTAL N = 90. SAMPLE AND BASE ARE DEPENDENT.

* * * * CALCULATED VALUES OF CHI SQUARE OR FISHER'S EXACT PROBABILITY * * * *

TYPE TABLE ORDER					. 32	IJ	.00	SJ	3.94	IN	.02
40	33	.63	.65	s		ĒP	.58	NP	1.00	IS	.51
*****	.08	1.00	1.00	N	.45	ST	3 12	TI	2 04	20	2.27
. 58	65	1.00	1.00	T	2.14	SF	1.25	TP	1.00		
10	.22	46	1.00	JP	1.83	NT	:06	FĴ	2.06		

SOURCE OF DATA:	GROUP TABULATED:	MBTI TYPE TABLE CENTER FOR APPLICATIONS
Freshmen Optometry		OF PSYCHOLOGICAL TYPE
Students Using Evewear	Female Freshmen	
Nira R. Levine, Ed.D.	Wearing Contact	LEGEND: % = PERCENT OF
Pacific University	Lenses	TOTAL CHOOSING THIS GROUP
Data collected 1976 - 1990		WHO FALL INTO THIS TYPE.
Tables created 05/11/90		I = SELFSELECTION INDEX:
		RATIO OF PERCENT OF TYPE
	N= 24	IN GROUP TO & IN SAMPLE.

	SENSIN	IG TYPES	INTUITI	VE TYPES		1.2101	-	2022
	WITH THINKING	WITH FEELING	WITH FEELING	WITH THINKING		N	8	I
	ISTJ	ISFJ	INFJ	INTJ		10 14	41.67 58.33	.94 1.05
	N= 3	N= 5	N= 0	N= 2	D S G N	12 12	50.00 50.00	.86 1.19
	%=12.50	%=20.83	% = 0.00	%= 8.33	I NI T GN F	8	33.33	.96
	I= .90	I= 1.12	I= 0.00	I= 1.79		15	62.50	.90
L	ISTP	ISFP	INFP	INTP		j 10	41.67	1.00
	N= 0	N= 2	N= 1	N= 1	T T	P 4	16.67	1.19
	%= 0.00	%= 8.33	8= 4.17	8= 4.17	P E	Ĵ - 5	20.83	.75
	I= 0.00	I= 1.79	I= .90	I= .90	R S C S	T 3 F 9	$ \begin{array}{r} 12.50 \\ 37.50 \end{array} $.60 1.01
	ESTP	ESFP	ENFP	ENTP	P N T N	F 7 T 5	29.17 20.83	1.05 1.49
	N= 0	N= 2	N= 3	N= 0	V S E S	J 8 P 4	33.33 16.67	.72
	%= 0.00 I= 0.00	%= 8.33 I= 1.19	%=12.50 I= 1.34	%= 0.00 I= 0.00	SE XN TN	P 5 J 7	20.83	1.12
1	 E S T J	 ESFJ	 E N·F J	 ENTJ	R - A T J V T	J 7 P 1	29.17 4.17	.96
	N= 0	N= 0	N= 3	N= 2	UE DR F GT F	P 8 J 8	33.33 33.33	1.30
	%= 0.00	%= 0.00	%=12.50	%= 8.33	IS N I G E	N 4 N 8	16.67	.90
	I= 0.00	I= 0.00	I= 1.34	I= 1.79		s 10	41.67	1.12

NOTE CONCERNING SYMBOLS FOLLOWING THE SELECTION RATIOS: "IMPLIES SIGNIFICANCE AT THE .05 LEVEL, I.E., CHI SQ. > 3.8; # IMPLIES SIGNIFICANCE AT THE .01 LEVEL, I.E., CHI SQ. > 6.6; * IMPLIES SIGNIFICANCE AT THE .001 LEVEL, I.E., CHI SQ. > 10.8. (UNDERSCORE) INDICATES FISHER'S EXACT PROBABILITY USED INSTEAD OF CHI-SQUARE.

BASE POPULATION USED IN CALCULATING SELECTION RATIO: Female Freshmen Using Eyewear BASE TOTAL N = 43. SAMPLE AND BASE ARE DEPENDENT.

* * * * CALCULATED VALUES OF CHI SQUARE OR FISHER'S EXACT PROBABILITY * * * *

	TYPE TAB	LE ORDE	R	E	.14	IJ	.00	SJ	3.79	IN	1.00
1.00	.72	.19	. 50	-		ĒP	.44	NP		IS	46
*****	. 50	1.00	1.00	S N	1.48	EJ	<u>.31</u>	NJ	.47	ES	.03
*****	1 00	62	*	т	06	ST	.15	TJ	.03		
<u></u>	1.00			Ê	.06	NF	1.00	FP	.29		
.08	.08	.62	50	J	. 32	NT	20	ŁJ	.87		
				P	. 32						

SOURCE OF DATA:	GROUP TABULATED:	MBTI TYPE TABLE CENTER FOR APPLICATIONS
Freshmen Optometry		OF PSYCHOLOGICAL TYPE
Students Using Eyewear	Male Freshmen	
Nira R. Levine, Ed.D.	Wearing Contact	LEGEND: % = PERCENT OF
Pacific University	Lenses	TOTAL CHOOSING THIS GROUP
Data collected 1976 - 1990		WHO FALL INTO THIS TYPE.
Tables created 05/11/90		I = SELFSELECTION INDEX:
		RATIO OF PERCENT OF TYPE
	N- 16	IN GROUP TO % IN SAMPLE.

SENSIN WITH	G TYPES WITH	INTUITIV WITH	VE TYPES WITH		N	8	I
THINKING	FEELING	FEELING	THINKING	· · · ·	ş 1	0 62.50	1.01
ISTJ	ISTJ	INFJ	INTJ	2		0 37.50	.98
N= 2	N= 1	N= 1	N= 1	G I		6 37.50	.93
\$=12.50	8= 6.25	%= 6.25	%= 6.25	NI CN	F 7	9 56.25	.85
I= .65 -	I= 1.47	I= 1.47	I= .98	TR	J 1	2 75.00	.95
ITSTP	ITSEP				2 -	4 25.00	1.18
1011	1.01.			R		5 31.25 1 6.25	.92 1.47
N= 0	N= 1	N= 0	N= 0	T S I	CP -	3 18.75	1.10
%= ⁻ 0.00	% = 6.25	% = 0.00	% = 0.00	P I	IJ	7 43.75	. 98
I= 0.00	I= 2.94	I= 0.00	I= 0.00	R S	ST SF	6 37.50 4 25.00	.88 1.47
ESTP	ESFP	ENFP	ENTP		NF NT	3 18.75 3 18.75	1.10
N= 2	N= 1	Ň= 0	N= 0	I V E	SJ SP	6 37.50	.80
\$=12.50	8= 6.25	%= 0.00	%= 0.00	SE-	JP	0 0 00	0 00
I= 1.96	I= 1.47	I= 0.00	I= 0.00	TI	Ĵ	6 37.50	1.18
 E S T J	ESFJ	ENFJ	I ENTJ		rj Fp	7 43.75 2 12.50	.79 1.18
N= 2_	N= 1	N= 2	N= 2	DR I GT I	7P 7J	2 12.50 5 31.25	1.18 1.34
%=12.50	%= 6.25	\$=12.50	8=12.50		EN SN	2 12.50 4 25.00	. 98 . 90
I= .73	I= .98	I= 1.47	I= .98		LS SS	4 25.00	.98

NOTE CONCERNING SYMBOLS FOLLOWING THE SELECTION RATIOS: "IMPLIES SIGNIFICANCE AT THE .05 LEVEL, I.E., CHI SQ. > 3.8; # IMPLIES SIGNIFICANCE AT THE .01 LEVEL, I.E., CHI SQ. > 6.6; * IMPLIES SIGNIFICANCE AT THE .001 LEVEL, I.E., CHI SQ. > 10.8. _ (UNDERSCORE) INDICATES FISHER'S EXACT PROBABILITY USED INSTEAD OF CHI-SQUARE.

BASE POPULATION USED IN CALCULATING SELECTION RATIO: Male Freshmen Using Eyewear BASE TOTAL N = 47. SAMPLE AND BASE ARE DEPENDENT.

* * * CALCULATED VALUES OF CHI SQUARE OR FISHER'S EXACT PROBABILITY * * * *

	TYPE TA	BLE ORDER		E	.00	IJ	1.00	SJ	.84	IN	1.00
.47	1.00	1.00	1.00	1	.00	EP	1.00	NP	.10	IS	1.00
*****	.34	******	1.00	Ň	.09	ST	25	TT	1 31	20	.13
.54	1.00	.54	1.00	T	1.02	SF	.42	TP	1.00		
.70	1.00	.60	1.00	r	72	NT	.73	FJ	.47		
				P	.72						