AN ABSTRACT OF THE THESIS OF

Benjamin J. White for the degree of Master of Science in Human Performance presented on May 28, 2002.
Title: Readability of Waiver of Liability Forms Used in Collegiate Intramural and Recreational Sports Programs.

Abstract Approved by Redacted for Privacy
Bradley J. Cardinal

Properly written waiver of liability forms can be an effective tool in decreasing injury liability of intramural and recreational sports programs. In order for a waiver to be effective, (i.e., held up in court), participants must not only read and sign the waiver, but they must understand it as well. Readability, the ease of which text can be read and understood, is an important part of a well-written waiver.

Waiver of liability forms should be written at a reading level consistent with that of the intended audience. On average, students read three grade levels below the last grade they completed in school. The highest grade level at which waiver of liability forms written for use in college settings should be the 9^{th} grade. The main goal of this study was to assess the reading level of intramural and recreational sport waiver of liability forms, and compare them to the 9^{th} grade level.

Nine NIRSA member schools and nine non-NIRSA member schools from each of the six NIRSA regions were randomly selected for inclusion in this study. Following multiple mailings, the forms received were scanned into a computer, and readability was assessed using the Readability Calculation software (Micro Power

& Light, Dallas, TX) for McIntosh. A one-sample t-test was performed to compare the forms to the 9th grade reading level. Forms were written significantly higher than the 9th grade level ($t[26]=14.53$, $p<.0001$). An analysis of variance was performed to assess possible moderating variables (e.g., NIRSA membership status and involvement of a risk management team in writing the waiver). No significant differences were found. Font size was also measured, and forms were found to have been written at a significantly higher level then the recommended 12 point font ($t[28]=-2.88$, $p<.01$). This study brings into questions the efficacy of waiver of liability forms used in many collegiate/university intramural and recreational sports programs in the U.S.

Readability of Waiver of Liability Forms Used in Collegiate Intramural and Recreational Sports Programs

by
Benjamin J. White

A THESIS

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Master of Science thesis of Benjamin J. White presented on May 28, 2002.

APPROVED:

Redacted for Privacy

Major Professor, representing Human Performance

Redacted for Privacy

Chair of the Department of Sport and Exercise Science

Redacted for Privacy

Dean of the Graduate School

I understand that my thesis will become part of the permanent collection of Oregon State University libraries. My signature below authorizes the release of my thesis to any reader upon request.

Redacted for Privacy

Benjamin J. White, Author

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INTRODUCTION

Ever since the early 1900's, recreational sports have been a part of campus life for college students. Beginning with the first collegiate intramural sports programs at the University of Michigan and Ohio State University (Meuller & Mitchell, 1960), intramural sports programs have provided non-varsity athletes the opportunity to compete. Intramural and recreational sports programs remain an integral part of collegiate life. With programs around the country boasting participation in the thousands, it's imperative that intramural and recreational sports programs continue to offer quality events and services.

Part of the responsibility of the intramural and recreational sports program is to offer safe environments in which to hold events. Participants should be provided with the best available facilities and be supervised by a properly trained staff that is capable of performing basic emergency care procedures when and if necessary. When these precautions are taken, a program greatly reduces its risk of injury liability.

Liability for injury is something that all intramural and recreational sports programs must manage. Injury liability refers to the state of being legally responsible for injury. Regardless of the precautions taken to insure the safety of

participants, injuries still can occur. As such, intramural and recreational sports programs must understand the types of injuries that render them liable. With any athletic sporting event, there is an assumed risk associated with participation. All participants should understand the inherent risk of the activity in which they are involved. For example, if a student playing intramural basketball lands on another student's foot and turns an ankle, this injury is an inherent risk associated with playing basketball. Intramural and recreational programs are not liable for this type of injury.

However, intramural and recreational programs may be held liable when any degree of negligence occurs in a participant's injury. For example, if an intramural basketball player turns an ankle after slipping in a puddle of water on the court, then the intramural department might be liable for the negligent act of failing to maintain a safe playing surface. This type of negligence is categorized as 'ordinary negligence.' Ordinary negligence is the failure to act as a prudent person would act in that situation (Cotten & Cotten, 1997). Other types of negligence are 'gross negligence,' and 'willful or wonton acts.' Gross negligence refers to not taking the precautions that even a careless person would have taken to avoid a potentially injurious situation (Cotten & Cotten, 1997). An example of this might be allowing observers to cross the middle of the basketball court during a game. A willful or wanton act is described as the "reckless disregard for safety," (Cotten & Cotten, 1997). For example, a willful or wanton act would be failing to respond in any way to an intramural sports participant's injury.

A properly written waiver will protect a program from ordinary acts of negligence. Gross negligence and willful or wanton acts are not protected through the use of waivers. A waiver is defined as:

> An agreement between the provider of a service and the participant, signed prior to participation, by which the participant agrees to excuse or absolve the provider of any fault or liability for the negligence of the service provider or it's employees. (Cotten & Cotten, 2001)

An intramural sports program assumes the role of the provider, and students are the participants. There are different types of waivers that might be used, including, stand-alone, part of a document, group and back of a ticket formats. Each can be effective in minimizing injury liability provided that it is written properly (Cotten & Cotten, 1997). Stand-alone waivers and part of document waivers are considered to be superior types of waivers, but all four types of waivers have been proven effective (Cotten & Cotten, 1997).

Effective waiver forms must comply with strict guidelines concerning language. Waivers must be clearly distinguished from any other documents or any other parts of a document. For example, a California court ruled in favor of the plaintiff in Leon vs. Family Fitness Center, stating that the waiver required by the club was fatally ambiguous as a result of being buried in parts of another document. In addition, the court also ruled that the 8-point font size in which the document was typed was too small (Herbert, 1998). For a waiver to be effective, it must be written with at least a 12-point font size (Cotten & Cotten, 1997).

The inclusion of the word negligence is also very important. It is assumed that the participant is responsible for any injury (s)he causes or inflicts upon her/him-self. What the program needs to protect itself against are injuries caused due to the negligence of the intramural sport staff. Because of this, it is important that the word 'negligence' be used as part of the waiver (Cotten & Cotten, 1997). For example, an Indiana court ruled in Powell vs. American Health Fitness Center of Fort Wayne Inc., that in order for the club to be released from liability due to its own carelessness, the word negligence must appear as part of the waiver (Herbert, 1998). While waivers that do not include the word negligence have been held up in court (Herbert, 1999), in order to assure the best possible written waiver, the word negligence should appear as part of the document.

Another critical aspect of a waiver is whether it is understandable. In order for a waiver to be effective, it must be written at a level that the intramural sport participant can understand (Cardinal & Seidler, 1994). This can be achieved by writing the form at a reading level that is comprehensible to the target audience.

A document's reading level, or readability, is measured by grade level equivalents. Reading levels start at first grade and go through the Ph.D. level. For instance, to read and understand a form written at the 15^{th} grade level would require the reading skills equivalent to a third year college student. People who can read at or above the 5^{th} grade level are considered literate (Doak, Doak & Root, 1996). The average reading level for American adults is eighth grade (Doak, et al., 1996). Furthermore, correlations between one's reading ability and educational attainment

suggest that people usually read about three grade levels lower than their highest year of completed school (Reed-Pierce & Cardinal, 1996). Thus, a typical college freshman may, in reality, read at about a ninth grade reading level.

LITERATURE REVIEW

Historically, the sport and exercise field has done a poor job of writing forms at a readable grade level. In a variety of studies, Cardinal, along with various colleagues, has shown how different forms in the sport and exercise field are written at a grade level above that of the typical American adult (i.e., 8th grade level). For example, Cardinal, Martin, and Sachs (1996) found that informed consent forms used in exercise and sport psychology were written at the 13th grade level, as opposed to the recommended 8th grade level. In another study, Cardinal (1993) found that health promotion materials on exercise were written at the 11.5 grade level. Cardinal (1995) found that journal articles in HPERD were written at the 14.9 grade level. Cardinal and Sachs (1992) found that exercise promoting literature was written at the 11.3 grade level. Cardinal and Seidler (1995) analyzed the readability of the 'Exercise Lite' brochure, and found that 69.6% of the participants couldn't read the form, which was written at the 18.4 grade level.

Two other studies done by Seidler and Cardinal looked at waiver forms used in sport and exercise settings. In 1996 they found that waivers recommended for use in exercise and sport settings only met 60.5% of the criterion set forth by Cotton's Waiver Evaluation Checklist (Seidler & Cardinal, 1996). The checklist examines things like protective language and requirements for a legal contract (Cotton & Cotton, 1997). In 1994 they found that, on average, waivers

recommended for use in exercise and sport settings were written at the 16.64 grade level (Cardinal & Seidler, 1994).

These studies illustrate the degree to which forms used in exercise and sport settings are unreadable to a majority of the population. Another study done by Cardinal (2000), examined the differences in comprehension scores on a cognitive test after participants read a waiver at either the 8^{th} or the 11^{th} grade level. Results showed that there were no differences between groups. The comprehension level of participants in both groups was significantly lower than 70%. Participants could not adequately comprehend either form (Cardinal, 2000).

This research suggests that it doesn't matter at what reading level waivers are written, because they still might not be understood. While Cardinal's most recent research found that it made no difference at what reading level forms are written, other research, as well as court cases, contradict this finding. For example, in a case brought before the Florida courts, three women filed suit claiming that the waiver they signed prior to participation in a research study was unreadable (Research Roundtable, 2000). The participants did not contest that they or their unborn babies were harmed in any way during the study. Nor did they contest that they had not read and signed the waiver; they had. Their suit was based only on the assertion that the informed consent and waiver of liability form used by the university researchers was written at a reading level higher than that of the average American adult. The case was settled out of court with a reward granted to the plaintiffs in the sum of $3.8 million. Having been settled out of court, this case is

not legal precedent, however, it does illustrate the point that readability is a major issue in writing waivers.

The need to assess waivers used in collegiate intramural sports is evident. Participants cannot be fully aware of their rights unless they are able to read and understand the waivers they are signing. Conversely, programs cannot be fully protected from liability for injury unless participants are able to read and understand the waivers they sign. To date, no study has examined the readability level of forms used by college and university intramural and recreational sports programs.

The goal of this study was to assess the readability of waivers used in collegiate intramural and recreational sports programs. It was hypothesized that these waivers would be written above the 9^{th} grade level. In an effort to see if the forms are written at a level readable by the majority of college students, the 9^{th} grade level was selected because college freshmen, having just finished 12^{th} grade, conservatively may only read at the 9^{th} grade level (Reed-Pierce & Cardinal, 1996). A secondary hypothesis is that NIRSA (National Intramural-Recreational Sports Association) institutional members would have waivers written at a lower grade level then NIRSA non-institutional members. This is because NIRSA members are more likely to have benefited from seminars regarding waiver effectiveness given at the NIRSA national conferences. Forms were also assessed in terms of use of the recommended 12 point font size and whether or not they contain the word negligence.

METHODS

PARTICIPANTS

A list of all NIRSA member and non-member institutions was obtained from the NIRSA national headquarters. The list was pre-screened and institutions that were outside the 50 states and those that were not institutions of higher learning were removed. The result was a list of 1,310 schools. The schools were then stratified into one of the six NIRSA regions and further separated by NIRSA membership status. The schools were then numbered. Nine NIRSA member institutions and nine non-members institutions were then randomly selected from each of the six regions, for a total of 108 schools.

PROCEDURES

A letter explaining the purpose of the study and requesting a copy of the waiver used by the intramural sports program, as well as a question about the involvement of a risk management team in writing the waiver and a postage paid return envelope was sent out on December 4, 2001. Schools not responding by January 1, 2002 were sent another letter on January 7, 2002. E-mail reminders were sent out on February 4-6, 2002 to all schools that had not responded by February 1, 2002. All waivers received by March 1, 2002 were included in the study (n=29).

Forms received were scanned into a computer using a UMAX Astra 3400 scanner. All forms were then checked for errors in scanning. Scanning errors were

identified and corrected using both Microsoft Word spell check and a visual comparison of the scanned word document and the original waiver.

MEASURES

Forms were assessed for readability using the SMOG readability test from the Readability Calculations (Micro Power and Light, Dallas TX) software for MacIntosh. The SMOG readability formula was chosen because the National Cancer Institute, Office of Cancer Communication, after reviewing nine readability formulas, recommended the SMOG formula (Cardinal & Seidler, 1994). Also, the National Cancer Institute is the organization that provided the readability data for the American population that was used for the recommendations in this paper.

The SMOG readability analysis consists of a random selection of 10 consecutive sentences at the beginning, middle and end of each document. Polysyllabic words (i.e., words containing three or more syllables) are then counted in each of those sentences. The square root of that number is then added to the constant "3", which yields the grade level required to ensure 100% comprehension of the document (standard error of prediction +/- 1.5 grade levels) (Cardinal & Seidler, 1994).

Concurrent validity was assessed through a correlation with the Flesh reading grade level scores. Flesh is another popular reading formula that is often used to establish the concurrent validity of SMOG reading level. In the current

study the correlation between the SMOG and Flesh scores was .95 ($p<.05$), thus supporting the validity of the findings.

ANALYSIS

Means and standard deviations for the forms were computed. Two separate one-sample t-tests were computed to compare the mean obtained for readability to the 9^{th} grade level, and the mean font size compared to the recommended 12 point level. An analysis of variance was then performed to assess the differences in reading level between NIRSA institutional and non-institutional members, public vs. private status, and involvement of a risk management team in writing the waiver form. A series of Chi-square tests was performed to determine whether the percent of forms containing the word "negligence" differed by any of the independent factors.

RESULTS

Of the 108 schools contacted, 47 responded (43.5%). Twenty-nine of those used waivers (61.7%). There was representation from each of the six NIRSA regions [(I:n=7) (II:n=7) (III:n=8) (IV:n=10) (V:n=5) (VI:n=10)]. The majority of schools were NIRSA members (72.3%), and the majority were also public institutions (59.6%). There were two forms that were too short to produce accurate readability calculations, and they were dropped from the remaining analyses (adjusted n=27).

The majority of forms had been approved by legal council (58.6%), but did not use the word negligence (69.0%). Readability scores ranged from the 9.8 grade level to the 18.7 grade level (M=14.57, SD=1.93). A one-sample t-test indicated that the forms were written at a significantly higher grade level than the recommended 9^{th} grade level ($t[26]=14.53$, $p<.0001$). Moreover, for descriptive purposes, this test was repeated against the 13^{th} grade level. Again, the forms obtained for inclusion in this study were significantly more difficult to read than this liberal estimate of reading ability ($t[26]=4.12$, $p<.001$). No significant differences were found in reading level between any of the independent factors examined (see Table 1.1).

Font sizes ranged from 8 point to 14 point (M=11.1, SD=1.68, 95% Confidence Interval:10.47-11.74). A one-sample t-test indicated that the forms

were written using a significantly smaller font than the recommended 12 point size ($t[28]=-2.88$, $p<.01$).

Table 1.1

Comparison of SMOG Reading Scores by Independent Factors

Independent Factors	n	M	SD	t	df	p
NIRSA Affiliation				.63	25	.52
Member	20	14.67	1.82			
Non-member	7	14.13	2.32			
Institution Type				-1.06	25	.30
Public	15	14.18	1.95			
Private	12	14.97	1.88			
Legal Council				.98	25	.34
Yes	16	14.83	1.77			
No	11	14.09	2.14			
Negligence				.23	25	.82
Included	8	14.66	1.82			
Not Included	19	14.47	2.02			

DISCUSSION

The present findings are generally consistent with previous research in this area. All of the forms were written above the 9th grade level, and 88.9% were written above the 12th grade level. It is clear that these forms are written at a level that may be unreadable by a substantial portion of those for whom they are intended. In addition, the majority of forms (55.0%) were written at a font size that is below the recommended level, and the majority of forms did not include the word negligence (69.0%). Each of these factors, either alone or in combination, may invalidate a waiver form and open up a recreational sports department to lawsuits (Cotten & Cotten, 1997; Seidler & Cardinal, 1996).

Clearly, there is much room for improvement with regards to waivers written for intramural and recreational sports programs. Some very simple changes that can be made are to increase the font size to the recommended size (12 point), as well as to insert a phrase about releasing the institution from liability for injury due to their own negligence. To specifically reduce the reading level of these forms, both sentence length and word choice decisions must be made. That is, to use the shortest and simplest sentences and words possible to make a point. For example, the phrase "waive my right to bring legal action," may be replaced by the phrase, "promise not to sue." The phrase, "the undersigned," might be replaced simply with the word, "I."

It may be difficult for some to comprehend that many college students don't read at a college level. It may, therefore, be easy to ignore the recommendation to write these forms at a 9th grade level. Given that there have been large legal settlements based solely on forms being too difficult to read, this would not be a prudent decision. Moreover, there may be certain groups of people who, just by their very nature, are unlikely to read at a college level. Students for whom English is a second language, for example, may be less likely to read at a college level than a college student for whom English is a first language. Those students should still be provided with equal opportunities to participate in intramural and recreational programming, and part of that participation is assuring their safety and making them aware of their rights, (vis-à-vis, an appropriately written waiver).

Whether or not a college student should read at a college level is not a topic for this paper, nor should judgments about students' ability to read be made by intramural or recreational sports professionals. What should be done is to try to ensure that the needs of the largest portion of the population are being met. This may require that forms be written at a lower reading level than was found in the present study.

Relative to other readability studies performed on physical activity and sport-related documents, the forms assessed in the present study ranked 4th out of eight as most difficult to read. These results are summarized in Table 2.1.

Table 2.1

Rank Order of Readability Scores Among Different Readability Studies in the Sport and Exercise Field

Rank	Study	Type	n	Reading Level
1.	Cardinal and Seidler (1996)	Readability of Exercise Lite brochure	1	17.0-18.5
2.	Cardinal and Seidler (1994)	Readability of exemplary participant forms recommended for use in sport and exercise settings	36	16.62
3.	Cardinal (1995)	Readability analysis of HPERD journal articles	40	14.9
4.	Present study (2002)	Readability of intramural and recreational sport waivers	27	14.57
5.	Cardinal, Martin and Sachs (1996)	Readability of informed consent forms used in exercise and sport psychology research	37	12.9
6.	Reed-Pierce and Cardinal (1996)	Readability of patient education materials	37	11.55
7.	Cardinal (1993)	Readability of printed materials on exercise	21	11.5
8.	Cardinal and Sachs (1992)	Readability of exercise promoting literature	54	11.3
Weighted Average for all studies			253	13.29

It must be noted, however, that a limitation of this study is that it did not measure the comprehension of waiver forms by college students. The only way to accurately determine at what reading level waiver forms should be written for college students is through an empirical study testing the comprehension of forms written at different grade levels. Another limitation of this study is its ability to determine if forms written at lower grade levels would be valid in the various state courts. As mentioned previously, states have different laws with regards to what constitutes a valid waiver. The removal of technical language may invalidate an otherwise valid waiver in states where waiver laws are very stringent.

Finally, though the forms included in this study came from each NIRSA region in the United States, the number of forms acquired was relatively small and therefore may not be representative of all forms used in intramural and recreational sports programs. Future studies should be pursued that seek to overcome these limitations.

CONCLUSION

A waiver can be a very effective tool in reducing liability for injury in intramural and recreational sports programs. A properly written waiver has the potential to save a college or university precious time and money battling lawsuits that might have otherwise been prevented. In order for waivers to be effective, they must be understood by the population for whom they are intended. Writing waivers at a grade level and in a font size that is readable by the majority of the population will likely increase the legal validity of the document.

Within the limitations noted, this study brings into question the efficacy of waiver of liability forms used in many college/university intramural and recreational sports programs in the United States. Among respondents, we also found that nearly 40% of the programs surveyed did not use any type of waiver of liability form.

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APPENDICES

APPENDIX A

January 13, 2002

Dear Recreational Sport Professional,

Intramural and recreational sports programs are important aspects of campus life. To maximize the success of these programs, they must be delivered in safe environments with an emphasis placed on risk management. An integral part of any risk management program is the appropriate use of written release and/or waiver of liability forms. For these forms to be fully effective, they must be read and understood by the participants. Information is needed to know how readable these forms are. This may assist intramural and recreational sports professionals design more effective written release and/or waiver of liability forms in the future.

We would appreciate receiving a copy of the written release and/or waiver of liability form used in your intramural sports program. The forms collected will then be scanned into a computer program and assessed for readability. **Your materials, along with others, will be combined and used for statistical summaries only.** Your involvement in this study is voluntary and you may refuse to participate. However, your program and institution were selected randomly so your participation is vital to the success of this study. Should you choose to participate in this study, we encourage you to keep a copy of this letter for your own records.

The materials you provide will be kept **private**. Special precautions have been put into place to assure this. For example, each return envelope is coded with a number. The number is used to contact those who did not respond to our request the first time. At the end of the study, all written release and/or waiver of liability forms will be destroyed.

Please detach and return the questionnaire on the bottom of page two of this letter and return it along with your waiver of liability used in intramural sports. If you do not use a waiver in your intramural sports program, please indicate so on the return portion of this letter. Please indicate whether you wish to learn the readability results of your waiver, and provide an e-mail address for the results to be forwarded to you. If you have already responded to this letter, please disregard.

This study is being conducted as part of a Master of Science thesis. If you have any questions about this study, please contact Mr. White at (541) 737-3568 (E-Mail: BenWhite6@hotmail.com) or Dr. Cardinal at (541) 737-2506. If you have any questions about your rights as a participant in this

research project, please contact the Oregon State University Research Office at (541) 737-3437.

Your help is appreciated. Thank you!

Sincerely,

Benjamin J. White, B.A.
Graduate Assistant

Bradley J. Cardinal, Ph.D.
Associate Professor

This study is endorsed by the National Intramural and Recreational Sports Association (NIRSA).

Kent Blumenthal
Executive Director
NIRSA

Readability of Intramural Sports Waiver of Liability

QUESTIONNAIRE

1) Is your institution public or private? (Circle one)

Public Private

2) Has legal council been involved in the writing, editing or approval of your waiver of liability? (Circle one)

Yes No

To what degree were they involved?

3) Would you like the readability results of your waiver? Yes/No
E-mail address:

APPENDIX B

INSTITUTIONAL REVIEW BOARD

OREGON STATE UNIVERSITY

312 Kerr Administration Building
Corvallis, Oregon
97331-2140

Telephone
541-737-3437
Fax
541-737-3093

IRB@orst.edu

October 24, 2001

Principal Investigator:

The following project has been approved for exemption under the guidelines of Oregon State University's Institutional Review Board (IRB) and the U.S. Department of Health and Human Services.

Principal Investigator(s):	Brad Cardinal
Student's Name (if any):	Benjamin J. White
Department:	Exercise and Sport Science
Source of Funding:	National Intramural and Recreational Sports Association
Project Title:	Readability of Waiver of Liability Forms in Collegiate Intramural Sports

Comments:

This approval is valid for one year from the date of this letter. A copy of this information will be provided to the Institutional Review Board. If questions arise, you may be contacted further. Please use the included forms as needed. The ADVERSE EVENT FORM is to be used to report any happening not connected with routine expected outcomes that result in bodily injury and/or psychological, emotional, or physical harm or stress. The MODIFICATION REQUEST FORM must be submitted for review and approval prior to implementation of any changes to the approved protocol.

Sincerely,

Laura K. Lincoln

Laura K. Lincoln
IRB Coordinator

APPLICATION FOR APPROVAL OF THE OSU INSTITUTIONAL REVIEW BOARD (IRB) FOR THE PROTECTION OF HUMAN SUBJECTS

Principal Investigator* BRAD CARDINAL, Ph.D E-mail [illegible]

Department Exercise & Sport Science Phone 7-2506

Project Title [illegible]

Present or (Proposed) Source of National Intramural and Recreational Sports Association

Type of Project: ___Faculty Research Project

✓ Student Project or Thesis*: Student's name [illegible] Phone [illegible]
E-mail: [illegible]
Student's mailing address [illegible]

Type of Review Requested: ✓ Exempt ___Expedited ___Full Board

The Oregon State University Institutional Review Board (IRB) for the Protection of Human Subjects is charged with the responsibility of reviewing, prior to its initiation, all research involving human subjects. The Board is concerned with justifying the participation of subjects in research and protecting the welfare, rights and privacy of subjects.

All material, including this cover sheet, should be submitted IN DUPLICATE to the Research Office, Kerr A312. Please call x7-0670 if you have questions. The following information must be attached to this form with each item identified and addressed separately or the application will be returned without review.

1. A brief description (one paragraph) of the significance of this project in lay terms.
2. A description of the methods and procedures to be used during this research project.
3. A description of the benefits (if any) and/or risks to the subjects involved in this research.
4. A description of the subject population, including number of subjects, subject characteristics, and method of selection. Include any advertising, if used, to solicit subjects. Justification is required if the subject population is restricted to one gender or ethnic group.
5. A copy of the informed consent document. The informed consent document must include the pertinent items from the "Basic Elements of Informed Consent" and must be in lay language.
6. A description of the methods by which informed consent will be obtained.
7. A description of the method by which anonymity or confidentiality of the subjects will be maintained.
8. A copy of any questionnaire, survey, testing instrument, etc. (if any) to be used in this project.
9. Information regarding any other approvals which have been or will be obtained (e.g., school districts, hospitals, cooperating institutions).

Signed [signature] Date 1/1-/01
Principal Investigator*

*NOTE: Student projects and theses should be submitted by the major professor as Principal Investigator.

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1. **A brief description (one paragraph) of the significance of this project in lay terms.**

Intramural and recreational sports programs are important aspects of campus life. To maximize the success of these programs, they must be delivered in safe environments with an emphasis placed on risk management. An integral part of any risk management program is the appropriate use of written release and/or waiver of liability forms. For these forms to be fully effective, they must be read and understood by the participants. At this time information is needed to know how readable these forms are. This may assist intramural and recreational sports professionals design more readable (i.e., effective) written release and/or waiver of liability forms. The overriding research question addressed in this study is: "How readable are written release and/or waiver of liability forms used in collegiate intramural and recreational sports programs?"

2. **A description of the methods and procedures to be used during this research project.**

This is a content analysis research project. Forms will be collected from a national sample of colleges/universities during the 2001-2002 academic year. The informed consent letter ('letter') will be mailed to potential participants on Dec. 1. A follow up letter will be sent to non-respondents on Jan. 1. All forms collected by Feb. 1 will be included in the study. Forms will be scanned into a computer and assessed for readability using readability analysis software.

3. **A description of the benefits (if any) and/or risks to the subjects involved in this research.**

Benefits: No direct benefits to the participants.

Risks: There are no foreseeable risks associated with participating in this study. Participating institutions will not be identified or singled-out in any way.

4. **A description of the subject population, including number of subjects, subject characteristics, and method of selection. Include any advertising, if used, to solicit subjects. Justification is required if the subject population is restricted to one gender or ethnic group.**

The sample will consist of institutions located in the six National Intramural and Recreational Sports Regions of the United States. Both member and non-member institutions will be contacted for inclusion in this study. Eighteen colleges/universities from within each region will be randomly selected and invited to participate (N = 108). Those agreeing to participate will constitute the study sample.

5. **A copy of the informed consent document. The informed consent document must include the pertinent items from the "Basic Elements of Informed Consent" and must be in lay language.**

Attached.

6. **A description of the methods by which informed consent will be obtained.**

College and University Intramural and Recreational Sport program Directors will be contacted and invited to participate in this study. Each participant will be mailed an informed consent document. In part, this document will serve as an "introduction" to the study. After reading the document participants will be encouraged to retain a copy of the informed consent form for their own files. Prospective study participants will not be asked to sign the informed consent form. Rather, by returning a copy of her/his institution's written release and/or waiver of liability form to the investigators he/she will be giving her/his implied consent to participate in this study.

7. **A description of the method by which anonymity or confidentiality of the subjects will be maintained.**

There will be no attempt to individually identify participating institutions. Data will be reported in summary fashion only. Written release and/or waiver of liability forms will be retained by the research supervisor (Brad Cardinal) in the Sport and Exercise Psychology Lab until all forms are scanned and verified in the computer. Forms will be numbered, and numbers only will be attached to readability scores. A separate key will be made listing numbers and the corresponding schools. Individual written release and/or waiver of liability forms will be destroyed once readability data on each form has been recorded.

8. **A copy of any questionnaire, survey, testing instrument, etc. (if any) to be used in this project.**

Not applicable -- This is/will be a content analysis project. The written release and/or waiver of liability forms will be acquired from the 108 institutions contacted.

9. **Information regarding any other approvals which have been or will be obtained (e.g., school districts, hospitals, cooperating institutions).**

Not applicable.

APPENDIX C

Study	Purpose	Sample	Measure	Findings
Cardinal (1993)	Assess readability of printed materials on exercise	21 exercise promotion forms	Readability	Youth texts had average reading level of grade 10.25 Adult texts had an average reading level of Grade 11.5
Cardinal (1995)	Assess readability of health, physical education, recreation and dance (HPERD) journal articles	40 HPERD journal articles	Readability	Articles written at 14.9th grade level
Cardinal (2000)	Assess comprehension of forms written at different grade levels	156 volunteers	Comprehension	Neither forms written at 8th or 12th grade levels were understood by participants
Cardinal, Martin, and Sachs (1996)	Assess readability of informed consent forms used in sport psychology research	37 informed consent forms	Readability	Forms were written at an average of 12.9 grade level
Cardinal and Sachs (1992)	Assess readability of exercise promoting literature	54 items of exercise literature	Readability	Literature was written at an average of 11.3 grade level
Cardinal and Seidler (1994)	Assess readability of "exemplary" participant forms used in sport and exercise settings	36 waivers of liability/releases	Readability	Forms written at average grade level of 16.62

Study	Purpose	Sample	Measure	Findings
Cardinal and Seidler 18.5 (1995)	Assess readability of "Exercise Lite" brochure	Exercise Lite brochure	Readability	Brochure written between grades 17 &
	Assess comprehensibility of "Exercise Lite" brochure	Exercise Lite brochure brochure	Comprehensibility	Only 34% of subjects could comprehend
Reed-Peirce and Cardinal (1996)	Assess readability of patient education materials	37 chiropractic education forms	Readability	Forms were written at an average grade level of 11.55
Seidler and Cardinal (1996)	Determine effectiveness of "exemplary" exculpatory forms	22 exculpatory forms	Waiver evaluation Checklist	Forms met between 60% and 67.5% of criteria for effective waivers

References

Cardinal, B. J. (1993). Readability of printed materials on exercise. *Wellness Perpectives: Research, Theory and Practice*, 9(2), 48-55.

Cardinal, B.J. (1995). Readability analysis of health, physical education, recreation and dance journal articles. *Perceptual and Motor Skills*, 80, 255-258.

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Cardinal, B. J., Martin, J. J., & Sachs, M. L. (1996). Readability of informed consent forms used in exercise and sport psychology research. *Research Quarterly for Exercise and Sport*, 67, 360-362.

Cardinal, B.J., & Sachs, M.L. (1992). An analysis of the readability of exercise promoting literature with implications and suggestions for practice. *Research Quarterly for Exercise and Sport*, 63, 186-190.

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Reed-Pierce, R., & Cardinal, B. J. (1996). Readability of patient education materials. *JNMS: Journal of the Neuromusculoskeletal System*, 4(1), 8-11.

Seidler, T. J., & Cardinal, B. J. (1996). "Exemplary" exculpatory agreement forms recommended for use in sport and exercise settings: Are they effective? *Journal of Legal Aspects of Sport*, 6(3), 178-181.