

Readability of “Exemplary” Participant Forms Recommended For Use In Sport and Exercise Settings

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■ INTRODUCTION

In our litigious society, managers of activity, physical education, and sport programs must not only be concerned with the safety of participants but also with reducing their exposure to claims of liability. This end can only be achieved through the establishment of a program designed to reduce or manage the risks involved. Peterson and Hronek (1992, p. ix) noted that “a risk management program is no longer a luxury; it is a necessity for the survival of private and public recreation and leisure service providers.”

One important aspect of an effective risk management program is the judicious use of participant forms such as warnings, informed consent forms, and exculpatory agreements which attempt to limit one’s legal liability. Although these forms are often referred to as “not being worth the paper they’re written on,” they do have a valuable place as part of an overall risk management strategy (Clarke, 1992).

It must be noted that “laws regarding the validity of exculpatory agreements differ so much among states that few, if any, generalizations would hold true for all states” (Cotten, 1993, p. 50). However, one recurring theme throughout the literature is that participant forms must be clear, understandable, and unambiguous (Clarke, 1992; Cotten, 1993; Herbert, 1992; Kozlowski, 1991; Coalition of Americans to Protect Sports, 1990). If the court determines the participant was not capable of reading or understanding the form, the possibility exists that the court may deem it invalid (Wong & Wolohan, 1992).

When discussing warnings specifically, van der Smissen (1990, Chapter 24.6, p. 40) states, “The essence of warnings is communication, effective communication with the individual so that the person will be knowledgeable about the risk and understand its meaning.” She goes on to list four criteria for effective warnings. One of these criteria is that the message must be comprehensible. About this van der Smissen (1990) states, “The warning must be in language understood by the one who is being warned. It must be appropriate to the grade level of the person as to terminology, must be in ‘native’ language (e.g., Spanish), must be within the

experience and understanding of the person (retarded, inexperienced, cultural background)" (Chapter 24.6, p. 44).

In order for a warning to be effective, Nygaard (1987, p. 68) lists three necessary factors. The third factor states that one must "create a three-layered level of comprehension of the risk: knowledge, understanding and appreciation (KUA)." He goes on to say, "Warnings must specify risks with clarity, in language appropriate for the performer, to create KUA."

Appenzeller (1985, Chapter 2.3, p. 35) lists nine factors, any of which may invalidate a waiver. The fifth factor, which applies specifically to this article, states, "ambiguity - both parties should know what they are signing, and what they are signing should be conspicuous and result from free and open bargaining." When discussing participant waivers, releases, and consent forms, Clarke (1992) writes that "the form must be readable and understandable to the participant . . ." The purpose of this study was to determine the readability level of "exemplary" participant agreement forms recommended for use in sport and exercise settings.

■ LITERACY IN AMERICA

Roth (1976), in a national four-year study involving more than 10,000 adults, found that 19.8% lacked the literacy skills necessary to function in modern society. To illustrate this, Roth reported that one in five American adults was unable to read a restaurant menu, a simple road map, or a catalog. More recent evidence suggests that the average American adult reads between the sixth-grade (Ferguson & Kersting, 1989; Meade & Byrd, 1989; Streiff, 1986) and eighth-grade (Boyd & Feldman, 1984; Walmsley & Allington, 1982) levels.

Methods

Written participant agreement forms (e.g., waivers, acknowledgment of risk, informed consent, and releases) were obtained through published textbooks ($n = 31$), a professional journal ($n = 1$), and through attendance at professional conferences ($n = 4$). The forms covered a variety of activities and events (e.g., sports festivals, recreational activities, specific sports). Each was regarded as "exemplary" in that each was published under such a rubric in a textbook/journal or provided as an example at a professional conference. For this study, the unit of analysis was the actual written participant agreement form ($N = 36$). Beyond readability, no effort was made to assess the latent or manifest content of these forms.

Each form's readability was assessed using McLaughlin's (1969) SMOG readability formula. This formula was selected because, based on a review of the advantages, disadvantages, and predictive validity of 12 different readability formulas, the National Cancer Institute, Office of Cancer Communication (1989), has recommended the SMOG formula for assessing readability. Also, the formula has been used in previous exercise and sports science research (Cardinal, 1993; Cardinal & Sachs, 1992).

The SMOG readability formula requires approximately 15 minutes to administer. The steps involved in its administration include: (a) randomly select 10

consecutive sentences near the beginning, middle, and end of each form; (b) count each word containing three or more syllables (i.e., polysyllabic) in the sentences selected; (c) determine the square root for the number of polysyllabic words found; and (d) add the constant "3" to the square root obtained. This yields the grade level of education necessary to ensure 100% comprehension of the form (standard error of prediction ± 1.5 grade levels). Inter-tester reliability was established by comparing the readability scores of each researcher with the readability scores of the other researcher using a sub-sample of 14 forms. The Pearson product moment correlation between testers was exact, ($r = 1.00$).

Concurrent validity was established by correlating the results of the SMOG readability formula with the results of the Fry (1968, 1977, 1989) readability formula. The Fry formula was selected because it has been shown to have high predictive validity and has been used extensively in previous research (Fry; Fusaro, 1988; Meade & Byrd, 1989). Spearman's rho was computed between readability scores derived from each readability assessment technique using a sub-sample of 14 forms. The correlation between formulas was .63 ($p < .005$), thus adding to the validity of the findings.

Descriptive statistics (M, SD, percentages) were used to describe the mean readability level required for the aggregate of texts. Confidence intervals (CI) were then established at the 99% level. Data were next compared to various educational levels using a one-sample t-test. The educational levels selected for comparison were: (a) eighth-grade level (i.e., a liberal estimate of the national adult reading average); (b) 12th-grade level (i.e., high school diploma); and (c) 16th-grade level (i.e., Baccalaureate degree). Although it was recognized that "years completed in school" has limited value with regard to literacy (Doak, Doak & Root, 1985), nonetheless these educational time periods were selected for illustration. Readers might be interested in knowing that in a study by Doak and Doak (1980), adults had word-recognition abilities approximately five grade levels lower than their "years completed in school." Thus, if anything, comparison to these educational levels would produce conservative results.

Forms were also classified by type (i.e., informed consent, waivers, and "others") to determine if readability differences existed between types of forms. A one-way analysis of variance (ANOVA) was performed with type of form serving as the independent variable and readability score serving as the dependent variable. For all analyses, alpha was set at the .05 level. Where multiple comparisons were performed, alpha was adjusted using the Bonferonni criterion (i.e., $.05/3 = .017$).

Results

On the basis of the SMOG reading formula, "exemplary" participant agreement forms were written at a reading grade level ranging from 10 to 27 ($M = 16.62$, $SD = 3.54$; median = 15.75; 99% CI = 15.01 to 18.24). Texts were found to be unreadable for persons who read at the eighth-grade ($t = 14.59$, $p < .0001$) and 12th-grade ($t = 7.82$, $p < .0001$) levels, but not for persons who read at the 16th-grade level ($t = 1.05$, $p > .15$). Two (5.56%) of the forms were written at a high school reading level (i.e., grades 10 to 12), 22 (61.11%) at a college (undergraduate) reading level

(i.e., grades 13 to 16), 8 (22.22%) at the graduate school level (i.e., grades 17 to 20), and 4 (11.11%) beyond the graduate school level (i.e., > 21). ANOVA revealed no significant differences between the three different types of legal forms acquired for this study ($F(2, 35) = 1.72, p > .15$).

■ DISCUSSION

On average, to read “exemplary” participant agreement forms often recommended for use in exercise and sport settings, one needs to have developed the reading skills equivalent to that of a college senior. Since these forms serve as examples for the profession, it is possible that the forms used in professional practice are unreadable by large segments of society. Although speculative, future large-scale studies aimed at describing the readability of legal forms used in various professional settings (e.g., fitness centers, physical education activity programs) appear warranted. If the problem of unreadable participant agreement forms is widespread, studies directed at writing readable legal forms for use in various physical activity settings should be pursued.

At a minimum, when “difficult to read” legal forms are used, persons being asked to sign such forms should be given an opportunity to have the form read and explained to them and then given the opportunity to ask questions about the form (Sol & Foster, 1992). The fact that the form was read and explained to the participant should be so noted on the actual form, as should the fact that an opportunity was given to ask, and have answered, questions pertaining to the form’s content.

Other factors also affect a text’s “user friendliness” (e.g., format, legibility, length, organization, print size). However, readability assessment is thought to be an important first step (Ley, 1986), particularly with written materials designed to be read independently (Rush, 1985). As such, future studies should attempt to rewrite participant agreement forms used in exercise and sport settings to determine if people are able to read and understand the rewritten forms better than existing forms. Studies will also be needed to ensure that participant agreement forms, rewritten at lower reading levels, do not lose content validity.

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Authors' Note

This manuscript is written at the 14.9 grade level.