

EJACULATION DISORDERS

Does Bother/Distress Contribute to the Diagnosis of Premature Ejaculation?

David L. Rowland, PhD,¹ Sean M. McNabney, MS,^{1,2} and Krisztina Hevesi, PhD³

ABSTRACT

Introduction: The role of bother/distress in the diagnosis of premature ejaculation (PE) has received minimal investigation compared with the 2 other diagnostic criteria, ejaculatory control and ejaculatory latency (EL).

Aim: This study assessed (i) the added variance explained by bother/distress to the diagnostic accuracy of PE and (ii) determined its overall contribution to a PE diagnosis.

Methods: The 3 diagnostic criteria for PE were assessed in 2,589 men (mean age = 38.2 years, SD = 13.5) in order to determine the contribution of each factor to a dysfunctional diagnosis. A series of regression and discriminant analyses were used to assess the value of bother/distress in explaining ejaculatory control and in predicting accuracy of PE group status. Commonality analysis was used to determine the relative contribution of each of these factors to the diagnosis of PE.

Main Outcome Measure: The major outcome was the quantified contribution of “bother/distress” to a PE diagnosis.

Results: Bother/distress accounted for about 3–4% of the variation in ejaculatory control and added only minimally to the prediction accuracy of PE group status (no, probable, definite PE). Commonality analysis indicated that bother/distress comprised about 3.6% of the unique *explained* variation in the PE diagnosis, compared with ejaculatory control and EL which contributed 54.5% and 26.7%, respectively. Common variance among factors contributed the remaining 15.5% to the PE diagnosis.

Clinical Translation: Bother/distress contributes least to the determination of a PE diagnosis. Its contribution is largely redundant with the unique and combined contributions of ejaculatory control and EL.

Strengths and Limitations: Using a well-powered and multivariate analysis, this study parsed out the relative contributions of the 3 diagnostic criteria to a PE diagnosis. The study is limited by its use of estimated EL, a single item assessment of bother/distress, and the lack of differentiation of PE subtypes, lifelong and acquired.

Conclusion: Bother/distress contributes minimally to the PE diagnosis, yet its assessment may be key to understanding the experiences of the patient/couple and to developing an effective treatment strategy. **Rowland DL, McNabney SM, Hevesi K. Does Bother/Distress Contribute to the Diagnosis of Premature Ejaculation?. Sex Med 2022;10:100548.**

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Key Words: Premature Ejaculation; Ejaculatory Control; Ejaculation Latency; Bother/Distress; Diagnosis

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¹Department of Psychology, Valparaiso University, Valparaiso, IN, USA;

²Department of Applied Health Science, School of Public Health, Indiana University, Bloomington, IN, USA;

³Institute of Psychology, Eötvös Loránd University, Budapest, Hungary

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INTRODUCTION

In the year 2000, the American Psychiatric Association introduced the 3 pronged diagnostic criteria for premature ejaculation (PE): “ejaculation upon minimal stimulation”; “before the person wishes it” (indicating a lack of self-efficacy); and causing “marked distress or interpersonal difficulty”.¹ These 3 criteria—established primarily by expert opinion—were subsequently modified in 2008 based on the limited empirical support

available at the time by the International Society of Sexual Medicine (ISSM),² now often expressed in shorthand as: a short ejaculation latency (EL) upon minimal stimulation; a lack of ejaculatory control; and negative psychosocial consequences such as bother/distress. Today, these criteria have been widely embraced by other professional organizations, with the specific language and qualifiers modified to fit their particular stakeholders.^{3–5}

The inclusion of these specific criteria by ISSM relied on a consensus panel drawing from several seminal studies that lent preliminary support to each prong of the definition. However, initial research supporting the PE criteria primarily emphasized the first 2 criteria, EL and ejaculatory control, with discussion regarding what timeframe constituted a “short” EL, and whether the most critical criterion for PE was a short EL or a lack of ejaculatory control.⁶ Despite an initial uptick in studies supported by pharmaceutical interests, subsequent research on each of these criteria has since dwindled. Furthermore, while issues surrounding EL and ejaculatory control received at least some scrutiny, empirical and/or conceptual exploration of the third PE criterion, namely, “bother/distress,” has all but been ignored with the exception of a few studies scattered over the years.^{7–10}

The Role of Distress in a PE Diagnosis

The diagnostic framework for PE assumes that its symptomatology (poor ejaculatory control and short latency) causes or exacerbates psychosocial and/or interpersonal difficulties for most men or couples.² In fact, all major current professional definitions of PE include “distress” or comparable terminology indicating a negative consequence.^{2–5,11} Consistent with this notion, some authors have argued that PE—in contrast with ED—occurs only within the context of a relationship and therefore the PE-related distress is largely the product of sexual interaction with a partner.^{12–14} Aligned with this premise, a recent study has found that bother/distress in men with PE during masturbation is greatly attenuated (although not absent) relative to partnered sex, although it is still greater than in men without PE.¹⁰ In addition, PE-related bother/distress appears less relevant to gay men and/or for sexual activities other than penile-vaginal intercourse, where the specific activity (eg, anal sex) is only weakly coupled with the partner’s physical/orgasmic response.⁹

Although the negative personal or interpersonal consequences of PE are assumed to drive treatment-seeking behavior,^{15,16} these negative consequences (eg, bother/distress) are often difficult to operationalize and (perhaps due to this) are far from universal among men having short ELs or a lack of ejaculatory control. For example, initial research on this construct (eg, 1990–2000) indicated that personal distress was reported in (only) 45–65% of men with short ELs.^{17–19} This surprisingly modest percentage may be attributable to the use of the specific descriptor “distress,” terminology that to many men suggests a severe condition

requiring immediate attention and action.²⁰ As such, terminology alluding to “distress” may not align well with men’s own self-reported feelings about PE. More inclusive analysis using the terms “bother, concern, upset, frustration, or feeling guilt” revealed reliably strong differences between PE and non-PE men, yet the overall percentage of men endorsing moderate-to-very high “bother” was still only about 70%.⁸ Thus, a significant portion of men with PE symptomatology appears to be “distress-free,” suggesting that a role for bother/distress in defining and diagnosing PE has been far less clear than for that of the other 2 criteria, ejaculatory control and EL. Despite this ambiguous role, PE-related Patient-Reported Outcomes (PROs)^{21–24} tend to place strong emphasis on the “bother/distress” dimension of PE, with more items assessing negative consequences (although not necessarily “distress” per se) than either ejaculatory control or EL.⁶

RATIONALE AND AIMS

In this study, we resurrect a concern initially raised in the ISSM consensus panel: whether “bother/distress” should be a requirement for a PE diagnosis.²⁵ We begin with the premise that the lack of ejaculatory control is a *sine qua non* for PE.^{26,27} In contrast to ejaculatory control, a man may ejaculate rapidly by choice, indicating that a short EL, while often associated with a lack of ejaculatory control and therefore a condition for PE, is not its defining characteristic. Similarly, an argument could be made that bother/distress represents a *consequence* of PE rather than its symptomatology and, as such, is not essential to its diagnosis.

The goal of this study was to test whether having/knowing information about the PE patient’s bother/distress level contributes unique variance to diagnosing PE and therefore improves the diagnostic accuracy of PE or, alternatively, whether bother/distress represents a redundant condition already subsumed by the severity of the other PE symptomatology. Specifically, we ask:

1. What are the interrelationships among bother/distress, EL, and ejaculatory control (Aim 1)?
2. Relative to EL, how much does bother/distress add to understanding of variance in ejaculatory control (Aim 2)?
3. Does including bother/distress improve the accuracy of classifying men into PE and non-PE groupings (Aim 3)?
4. How much unique variance does each of the criteria for PE contribute to its diagnosis (Aim 4)?

METHODS

Participants

Participants were recruited via self-selection (July 2019 to February 2020) to complete a survey pertaining to sexual health and behavior through 2 approaches. The first approach recruited men from the United States and other English-speaking countries ($n = 699$) who responded to the online research homepage,

postings on several reddit.com forums, or any of the unpaid social media (eg, Facebook) and public announcements/advertisements. The second approach recruited men from Hungary who responded to comparable forum posts, unpaid online/public advertisements, or the Hungarian research webpage ($n = 3,243$). A third group (not represented in the current analysis) included university men in Hungary ($n = 134$) who volunteered to complete a hardcopy version of the questionnaire. These men were each assigned an anonymous code to enable test-retest reliability analysis on specific questionnaire items after 4–6 weeks.

The completion rate for the survey was 81% of those who initially opened it ($n = 4,087$). Among those completing the survey, men who had never had a sexual partner or who were not having sex with their current partner; identified as “asexual” or transgender/nonbinary; intentionally chose not to ejaculate; or showed inconsistency in responding as determined by embedded “attention checks” in the survey (total exclusion $n = 1,498$), were excluded from analysis. The final Internet convenience sample consisted of 2,589 men 18+ years of age (mean = 38.2, SD = 13.5; range = 18–85).

Survey Questionnaire

During the survey development, a pilot study was conducted with 7 focus groups, 2 from the United States ($n = 10$, mean age = 32.4), and 5 from Hungary ($n = 79$, mean age = 20.7). Group members reviewed the questionnaire items, commented on their relevance and clarity, and suggested both wording changes and additional response categories.²⁸ Focus groups also appraised item face-validity and assessed the time required for survey completion. For Hungarian respondents, the questionnaire was translated to Hungarian by a professional translator and back-translated to English to ensure preservation of meaning.

The first part of the 55-item survey queried about demographics, including the respondent's age, education, anxiety/depression during the previous 6 months (as a proxy for psychological health), and chronic medical conditions related to sexual functioning. The second portion examined participants' sexual histories during the previous 12–24 months, including sexual orientation, number of current sexual partners, self-reported importance of and interest in sex, general relationship satisfaction, and sexual relationship satisfaction. This section also evaluated the frequencies of partnered sex, masturbation, and pornography use during masturbation. The third section addressed common sexual dysfunctions in men and included items from the International Index of Erectile Function, abridged version (IIEF-5),²⁹ and the Premature Ejaculation Diagnostic Tool (PEDT),²³ as well as questions to assess delayed/inhibited ejaculation (see below). Questions from standardized instruments, which were already language-validated in Hungarian, were used in their translated form, with minor wording changes when necessary, for example, substituting “intercourse” with “partnered sex.”

Major Variables of Interest

Consistent with the APA/DSM, AUA, and ISSM definitions for PE, the 3 variables included in the diagnostic criteria of PE were explored in this analysis: (i) ejaculatory control; (ii) ejaculatory latency (EL); and (iii) bother/distress. When appropriate, items were drawn from existing standardized instruments commonly used in the study and assessment of PE. Other explanatory covariates of theoretical and/or empirical relevance related to sexual response (eg, erectile functioning) were also included in various regression analyses. In some instances, related items were pooled, thereby avoiding multicollinearity. When 3 or more items were pooled, Cronbach's alpha is reported³⁰; if only 2, a correlation coefficient is reported.

Variables Related to the Assessment of Premature Ejaculation

Ejaculatory Control, Based on Items From the Premature Ejaculation Diagnostic Tool (PEDT). Three categories of PE—no, probable, and definite—were created based on participants' responses on the PEDT, a standardized and validated assessment instrument used in the diagnosis of PE.³¹ Specifically, we used the 3 items assessing ejaculatory control during partnered sex—the core symptom of PE^{26,27}—but did not include 2 items assessing bother/distress, which was assessed separately (see below). Consistent with the general rubric for scoring the PEDT, for the included items (scaled 1–5, with higher scores meaning greater probability of PE), a proportionate scale was generated: scores ≤ 8 represented “no/low PE,” 9–12 “probable PE,” and 13–15 “definite PE.” For this score, the test-retest correlation during partnered sex was 0.85 and Cronbach's alpha, depending on sexual orientation or type of partnered sexual activity, ranged from 0.80 to 0.83.

Ejaculation Latency. Men estimated their average/typical ELs during partnered sex—defined as the interval from the time that penile stimulation begins (usually penetration), with the goal of moving toward ejaculation, to the time of ejaculation—by selecting from the following ordered categories: 1 = less than 1 minute; 2 = 1–2 minutes; 3 = 3–5 minutes; 4 = 6–10 minutes; 5 = 11–15 minutes; 6 = 16–20 minutes; 7 = 21–25 minutes; 8 = >25 minutes; 9 = I seldom/never reach orgasm. We used these onset and termination points because ELs were assessed during various forms of partnered sex, which could include not only vaginal or anal penetration, but also manual and/or oral stimulation by the partner, which are not readily defined by an act of penetration. Men who chose not to ejaculate during partnered sex, for whatever reason, were excluded from the analysis. Test-retest reliability for this item was 0.72.

Bother/Distress. The construct of bother/distress was assessed by asking “during sex with your partner, if you have difficulty

with sex such as ejaculating before you want, does this bother, upset, or frustrate you, or make you feel guilty,” with response options 1 = almost never, 5 = almost always. For bother/distress during partnered sex, the test-retest correlation was 0.74. This item was modeled after a validated question included in the PEDT²³ but expanded beyond the terminology of just “distress.”

Other Explanatory Variables

Other variables were incorporated into specific regression analyses as covariates to determine whether they added to the understanding of variation in ejaculatory control.

Erectile dysfunction (ED) during partnered sex was assessed for use as a potential covariate in the regression analyses by using 4 IIEF-5 items related specifically to erection²⁹ (one item focusing on satisfaction during intercourse was not included). For the selected items (scaled 1–5), lower scores represented greater tendency toward erectile dysfunction. Internal reliability for these 4 items was 0.89 and the test-retest correlation ($\alpha = 0.84$).

Sexual Interest/Importance. For this construct, 2 items were combined: “Please rate the overall importance of sex in your life in general (partnered sex and/or masturbation)” (1 = not at all important, 5 = very important), and “Please rate your overall level of interest/desire for sex (either partnered sex or masturbation)” (1 = not at all interested, 5 = very interested). The Spearman correlation for the 2 items was 0.73. Test-retest correlation was 0.85.

Other Sexual Response Parameters. *Other sexual response parameters* were assessed using 2 items. In the first, approximate frequency of partnered sexual activity with the current/most recent sexual partner was assessed on a 1–10 scale, with the frequency increasing steadily. In a parallel question, approximate frequency of masturbation was assessed, again with frequency increasing steadily, on a 1–11 scale.

Age and Health. In addition to age, 2 items related to general health were included. The first queried about medical problems and was aimed at assessing the participant’s general level of physical health: “Do you currently have any of the following medical problems that might interfere with sexual response” (with a list of examples provided). The second, as a general measure of psychological health/functioning, asked: “Are you currently suffering from persistent (eg, more than 6 months) or recurrent anxiety or depression?” Each question allowed for a “no” or “yes” response.

Origin-of-Data. Preliminary exploration of the data noted several differences related to national origin (origin-of-data: USA+ vs Hungary), including age, education level, percent indicating anxiety, and overall relationship satisfaction. However, no

differences emerged on the 3 measures related to the diagnostic variables for PE, and when included in preliminary regression analyses on the various PE diagnostic criteria, this variable did not emerge as a significant factor. As a result, it was not included in the final regression analyses.

Procedure

Ethics approval for the study was obtained from the Institutional Review Boards (IRB) at the authors’ institutions in Hungary and the United States. The 55-item online survey took approximately 20 minutes to complete. Participants were guaranteed anonymity, and safeguards were implemented to prevent multiple submissions. Informed consent was obtained by participants’ checking boxes attesting (i) to their current age being ≥ 18 years, and (ii) to their informed consent before accessing the questionnaire. Respondents were notified that they could end participation at any time by closing the webpage.

Design and Statistical Analyses

To understand the role of bother/distress in the PE diagnosis, we undertook a multi-pronged analytical approach. Our first aim attempted to verify findings reported in prior studies to ensure that our measures were yielding similar interrelationships. We then used regression analyses to assess the amount of added variance in ejaculatory control explained by including bother/distress. We did so by using the block entry method, with ejaculatory control as the outcome variable: in Model 1, the first entry was EL (Step 1), followed by bother/distress (Step 2), followed by a block of other variables relevant to sexual responding. In Model 2, we reversed the order of Step 1 and Step 2, as these 2 variables were correlated, and thus the first variable entered included both its unique variance and its covariance with the second variable.

In the third step, we used EL and bother/distress in discriminant analysis to assess their accuracy in classifying men into PE or non-PE groups. In the fourth step, we used commonality analysis³² to determine the unique and common variance contributions of each of the 3 variables to the diagnosis of PE. This procedure involved regressing unique pairs of variables on the third variable for all possible combinations of predictor and outcome variables, that is, each variable served as both a predictor variable in combination with another predictor variable, and as an outcome variable. This procedure generated 3 separate multiple linear regressions. Analyses were performed using either IBM SPSS Statistics, version 27.0³¹ or R (version 4.0.2)³³ in the RStudio environment, version 1.3.1073.³⁴

RESULTS

Description of the Sample

Table 1 provides descriptive information regarding the sample, including measures of centrality or percentages for major

Table 1. Description of the sample ($n = 2,589$)

Variable	Mean (std. dev.)
Age (years)	38.2 (13.5)
Level of education	2.87 (1.57)
Anxiety/depression (% yes)	23.2 %
Medical issues (% yes)	22.0 %
Erectile function (range 4–20, 4–9 severe ED)	17.16 (3.49)
Frequency of partnered sex (range 1–10)	5.96 (1.78)
Frequency of masturbation (range 1–11)	5.62 (2.15)
Sexual interest (range 2–10, 10 = high)	8.11 (1.60)
Sexual relationship satisfaction (range 1–5, 5 = high)	2.91 (1.85)
Overall relationship satisfaction (range 1–5, 5 = high))	2.62 (1.72)

study variables along with relevant covariates used in the regression analyses.

Aim 1: Measures of Association/Distribution Among PE Diagnostic Variables

Pearson correlations among the 3 diagnostic variables were moderate and significant ($P < .001$). The correlation between ejaculatory control and estimated EL was 0.42, between ejaculatory control and bother/distress, -0.28 , and between EL and bother/distress, -0.22 . The somewhat low correlation between ejaculatory control and bother/distress is partly clarified by the distribution of bother/distress across categories of no, probable, and definite PE, as seen in Table 2. Nearly 38% of men with no PE responded 4 or 5 on the 5-pt scale assessing bother/distress during partnered sex. About 50% of men with moderate PE responded 4 or 5; and about 78% of men with definite PE responded 4 or 5. Thus, although greater distress was broadly associated with lower ejaculatory control, the relationship showed substantial variation around the regression line.

Aims 2: Does Bother/Distress Help Explain Variance in Ejaculatory Control?

Using the block entry method, regression analysis was used to determine the amount of variance in ejaculatory control

Table 2. Distribution of bother/distress across no, probable, and definite PE groups ($n = 2,378$)*,†

Bother/distress	No PE	Probable PE	Definite PE
1	328 (17.8%)	27 (6.6%)	6 (4.8%)
2	334 (18.1%)	48 (11.7%)	4 (3.2%)
3	485 (26.3%)	128 (31.3%)	18 (14.4%)
4	404 (21.9%)	95 (23.2%)	34 (27.2%)
5	293 (15.9%)	111 (27.1%)	63 (50.4%)

* $\chi^2[8] = 156.37, P < .001$.

†Overall summary: No PE ($n = 1,844, 77.5%$), Probable PE ($n = 409, 17.2%$), Definite PE ($n = 125, 5.3%$).

explained by EL (Step 1), followed by the added variance explained by bother/distress (Step 2). This was then followed by a third step in which a set of explanatory variables relevant to sexual response was entered (Step 3). Because EL and bother/distress shared variance ($r = -0.22$), a second analysis reversed Steps 1 and 2, as the first variable entered included their shared variance.

Tables 3.1 and 3.2 show that EL accounted for 27.1% of the variance in ejaculatory control ($P < .001$). The addition of bother/distress increased this amount by 3.1% ($P < .001$), and inclusion of all other variables increased the amount of explained variance only by another 0.1% ($P = .728$). Within this third block, none of the individual variables was significant.

When the order of variables in Steps 1 and 2 was reversed, results showed a similar pattern. Bother/distress accounted for 5.9% of the variance in ejaculatory control ($P < .001$). In contrast, EL accounted for 24.4% of the variance ($P < .001$); the third block again accounted for 0.1% ($P = .728$).

Aim 3: Does Bother/Distress Improve Classification of Men Into PE Diagnostic Categories?

Discriminant analyses were performed to predict PE group status based on EL, bother/distress, or a combination of the 2. We used either 3-group outcomes (no, probable, definite PE categories), or 2-group outcomes where (i) the probable and definite PE categories were combined into a single category (probable/definite PE vs no PE), or (ii) where the outcome was dichotomized into no PE vs definite PE. This latter strategy was included because categorizing a continuous variable (as is typically required as part of a diagnostic procedure) often decreases classification accuracy of the predictor variables.³⁵ We were therefore interested in classification accuracy when dichotomization was maximized by using the 2 extreme categories.

Significant mean differences occurred for both variables, and although Box's M was significant, the lack of homogeneity of covariance was not considered a problem due to the very large sample size. Discriminant function indicated that together both variables accounted for 48% of the variance in ejaculatory control. However, while EL (or EL together with bother/distress) was significant ($P < .001$) and the added discriminant function

Table 3.1. Block entry regression first of EL and then of bother/distress on ejaculatory control ($n = 2,503$)

Block	Predictor covariate(s)	ΔR^2	Overall R^2
1	Ejaculation latency	0.271*	0.271*
2	Bother/distress	0.031*	0.302*
3	Age	0.001	0.303
3	Medical issues		
3	Anxiety/depression		
3	Erectile function		
3	Interest/importance of sex		

*Indicates $P \leq .001$ for overall R^2 or the ΔR^2 .

Table 3.2. Block entry regression first of bother/distress and then of EL on ejaculatory control ($n = 2,503$)

Block	Predictor covariate(s)	ΔR^2	Overall R^2
1	Bother/distress	0.059*	0.059*
2	Ejaculation latency	0.244*	0.302*
3	Age	0.001	0.303
3	Medical issues		
3	Anxiety/depression		
3	Erectile function		
3	Interest/importance of sex		

*Indicates $P \leq .001$ for R^2 or the ΔR^2 .

from including bother/distress was also significant ($P = .001$), the effect on the accuracy of predictions was barely improved, as noted below.

Table 4 displays the accuracy of the classifications using various combinations of predictor variables for either the 2-group or 3-group outcomes. Not unexpectedly, predicting 2-group outcomes of no vs definite PE was more accurate than either the 3-group outcome or the 2-group outcome that included the full range of PEDT scores (as per the rationale above). For 3-group outcomes, using only EL, the accuracy was 71.6%; using only bother/distress, the accuracy was 69.8%. Using both EL and bother/distress raised the overall accuracy to 72.3%, indicating that adding bother/distress improved the accuracy by only 0.7%.

For 2-group outcomes for no PE vs probable/definite PE, EL alone predicted with 76.0% accuracy whereas bother/distress alone resulted in 69.8% accuracy. Together they resulted in 76.1% accuracy (Table 4), with the addition of bother/distress improving accuracy by only 0.1%. For the 2-group outcomes of no PE vs definite PE (eliminating the middle “probable” PE category), EL alone predicted with 90.7% accuracy whereas bother/distress alone resulted in 88.8% accuracy. Together, they provided 91.7% accuracy, with bother/distress adding 1% predictive accuracy.

Aim 4: Using Commonality Analysis to Understand the Relative Roles of Each PE Diagnostic Criterion

The final series of regression analyses enabled determination of unique and common variances for each of the 3 variables used

in the diagnosis of PE. Each analysis generated commonality coefficients for each of the predictor variables, along with their unique and common contribution as a percentage of the explained variation in the outcome variable. In the first analysis (Table 5), EL and bother/distress were used to predict ejaculatory control. The overall R^2 for the regression model was 0.2887, that is, EL and bother/distress together explained nearly 29% of the variation in men’s ejaculatory control. EL demonstrated the strongest unique contribution to ejaculatory control, accounting for 79.80% of the model’s utility (unique $r^2 = 0.23$). Bother/distress showed a much smaller unique contribution of 10.74% (unique $r^2 = 0.031$). The common variance represented 9.47% of the model fit (common $r^2 = 0.027$).

For the second regression (Table 5), ejaculatory control and bother/distress were used to predict EL. The full model accounted for approximately 26% of the variance in the EL outcome (overall $R^2 = 0.2578$); however, bother/distress was not a statistically significant predictor in the model. Ejaculatory control uniquely accounted for 93.24% of the model’s predictive ability (unique $r^2 = 0.2404$), whereas bother/distress uniquely predicted under 1% of the variance in EL (unique $r^2 = 0.0001$). The common variance (common $r^2 = 0.0173$) represented 6.72% of the model’s predictive utility.

For the third regression (Table 5), EL and ejaculatory control were used to predict bother/distress. This model was weaker than either of the 2 other regressions, with an overall $R^2 = 0.0585$, or approximately 6% of the variance in bother/distress. Ejaculatory control uniquely accounted for 70.2% of the model fit (unique $r^2 = 0.041$). In comparison, EL was a weak and non-significant predictor of bother/distress, uniquely explaining <1% of the variation (unique $r^2 = 0.0001$). Since EL and ejaculatory control showed a moderately strong, inverse association (Spearman $r = -0.42$), the amount of shared variance between the predictor variables is noteworthy (common $r^2 = 0.017$), representing 29.6% of the model’s predictive utility.

Assuming a closed system in which no other variables than the 3 under consideration were contributing to a diagnosis of PE, by viewing all 3 regression analyses together, it was possible to estimate the relative importance of each of the 3 variables—EL, ejaculatory control, and bother/distress—to the PE diagnosis. Adding the unique contribution (percentages) of each variable

Table 4. Accuracy of group predictions using EL and bother/distress, with groupings based on PEDT-determined levels of ejaculatory control

Outcomes	Outcome groups	% Cases correctly classified and related P value		
		Single predictor		Both predictors
3 ($n = 2,589$)	No vs probable vs definite PE	EL	71.6% (<.001)	72.3% (<.001)
		Bother/distress	69.8% (<.001)	
2 ($n = 2,589$)	No PE vs probable/definite PE	EL	76.0% (<.001)	76.1% (<.001)
		Bother/distress	69.8% (<.001)	
2 ($n = 2,033$)	No PE vs definite PE	EL	90.7% (<.001)	91.7% (<.001)
		Bother/distress	88.8% (<.001)	

Table 5. Commonality analysis to determine contribution of bother/distress to ejaculatory outcomes ($n = 2,378$)

Sources of variation in ejaculatory control	Commonality coefficient	Model contribution (%)
Ejaculatory latency (EL)	0.230	79.80%
Bother/distress	0.031	10.74%
Common/shared variance	0.027	9.47%
Multiple $R^2 = 0.288$		
Sources of variation in ejaculatory latency	Commonality coefficient	Model contribution (%)
Ejaculatory control	0.240	93.24%
Bother/distress	0.0001	0.04%
Common/shared variance	0.017	6.72%
Multiple $R^2 = 0.258$		
Sources of variation in bother/distress	Commonality coefficient	Model contribution (%)
Ejaculatory control	0.041	70.2%
Ejaculatory latency (EL)	0.0001	0.2%
Common/shared variance	0.017	29.6%
Multiple $R^2 = 0.059$		

across the regressions and dividing by the overall percentage (300% for the 3 analysis) yields the average partition of R^2 attributable to each variable. Specifically, ejaculatory control uniquely contributed 54.5% to the PE diagnosis; EL uniquely contributed 26.7% to the PE diagnosis; and bother/distress uniquely contributed 3.6% to the PE diagnosis. The remainder of the contribution—15.2%—was derived from the common (or shared) variances among the 3 variables.

DISCUSSION

To our knowledge, this is the first study to attempt to understand the “added value” of including bother/distress as a criterion for a PE diagnosis. We assessed its potential contribution by viewing the data from a number of different perspectives and, in so doing, have been able to establish a better understanding of the contribution for each of the specific criterion variables used in the diagnosis of PE. Our findings have not only affirmed several previous patterns but enabled significant new insights into the role of bother/distress in the diagnosis of PE.

The Respective Roles of PE Diagnostic Variables

Previous research has affirmed the primacy of poor ejaculatory control as a *sine qua non* for a PE diagnosis.^{26,27} Not only have studies indicated significant and strong differences in ejaculatory control between men diagnosed with PE (either clinically or via self-report) and men without PE,^{8,17,18,27,36} but perceived control over ejaculation—in contrast with EL—has significant direct effects on both sexual satisfaction and personal distress related to the PE and has emerged as the most important explanatory variable in models predicting PE status and PE severity.

Short ELs are also symptomatic of men who have difficulty delaying their ejaculatory response. Although professional standard committees have advocated different EL thresholds for PE, the range has nevertheless been small, typically from about 60 to 120 seconds.^{2,3,5} Correlations between ejaculatory control and EL tend to be around 0.30–0.60,^{10,23,27,37} with the current analysis indicating a .40 correlation. In support of a role for EL in the diagnosis of PE, numerous studies have demonstrated that men with PE have substantially shorter ELs than men without PE.^{17,18,36,38}

In contrast with ejaculatory control and EL, the relationship between bother/distress and PE appears to be the most tenuous of the 3 criterion variables, with sexual difficulty in general being a fairly weak predictor of sexual distress.^{7,10} In the current analysis, the correlations between bother/distress and either ejaculatory control or EL ranged from -0.20 to -0.28 [see also ref.¹⁰], indicating a low percentage of covariance. While previous research has demonstrated significant differences in men with and without PE,^{8,17–19} sexual–response-related distress is only moderately present among men with PE: For example, only 45–70% of men with short ELs or poor ejaculatory control, or self-identified as having PE, report moderate-to-severe distress related to their condition. Interpreted inversely, nearly 30–35% of men showing PE symptomatology do not report concomitant sexual distress.

The Contribution of Distress to a PE Diagnosis

The results of the current analysis support 3 broad conclusions regarding the role of bother/distress in diagnosing PE. First, EL explains considerably more variance in ejaculatory control than bother/distress and is also superior to bother/distress in

predicting membership in PE and non-PE groups. Second, combining the EL and bother/distress measures does not add a clinically meaningful advantage (typically <1%) to explaining variance in ejaculatory control or in predicting PE status, suggesting that these 2 variables are largely redundant. For example, prediction accuracy improved by only 0.1% to 1% when bother/distress was added in the discriminant analysis. And third, if a choice must be made, EL slightly outperforms bother/distress in its accuracy of a PE diagnosis based on ejaculatory control or categorization of PE status. In other words, knowing a patient's EL leads to a more accurate PE diagnosis than knowing his level of bother/distress; and once EL is known, bother/distress adds little or nothing to the diagnostic accuracy. We further note that the set of other covariates entered in block 3—all of which are known to vary with sexual response—did not improve the model's ability to explain variance in ejaculatory control.

Supplementing the above information, commonality analysis was used to parse out the unique and common contributions of each of the 3 variables used in the PE diagnosis. Using the assumption of a closed system (in which no other variables were considered), ejaculatory control contributed the largest percentage of explained variance in the PE diagnosis, at 54.5%, reiterating its role as the most critical variable in diagnosing PE. EL—also considered an important part of PE symptomology—contributed roughly half the amount of ejaculatory control to the explained variance in the PE diagnosis, at 26.6%. Bother/distress provided the least unique contribution to the PE diagnosis, at 3.6%. The remainder of the contributing variance—15.2%—came from shared variances among the 3 diagnostic variables. This analysis reinforces the conclusion that bother/distress contributes little to the overall PE diagnosis, as the unique variances contributed by ejaculatory control and EL, along with their common variance, represented 96.4% of the contribution to the PE classification.

Integration and Context

Our findings indicate that knowing the severity of PE symptomology—for example, the extent of lack of ejaculatory control and the shortness of EL—essentially nullifies any added contribution from bother/distress in the diagnosis of PE. From a clinical perspective, we surmise that clinicians who treat men/couples with PE merely assume that their presentation at the clinic for sexual help is evidence of dysfunction-related distress, thereby fulfilling this condition for a PE diagnosis. At the same time, we wonder whether clinicians routinely collect additional information regarding distress—either through PE-related PROs or other instruments—in order to verify the clinical diagnosis for PE. From a research perspective, our data also suggest that once PE symptomology (ejaculatory control and EL) is assessed, bother/distress adds little to the classification of PE status.

In this respect, our findings align with the perspective of Amoretti and Lalumera³⁹ who argue that the large amount of imprecision currently involved in the operationalization of

bother/distress—or comparable terms such as worry, guilt, and anxiety—does little to distinguish between normal vs dysfunctional men and may, at the same time, actually increase the likelihood of an erroneous classification (due to overemphasis on the distress dimension). Yet, despite the non-essential role of distress in the diagnosis of PE, the 4 commonly used PROs for assessing PE—or changes in PE in response to treatment^{21–24}—overemphasize the role of distress in the assessment of PE, with negative consequences and distress items accounting for 40% to 75% of the assessment tool.

Despite the lack of utility of bother/distress in the *diagnosis* of PE, we nevertheless view its assessment as a key part of prognosis, treatment strategy, and treatment assessment. Thus, we differentiate between its role in “diagnosing” PE vs “understanding the PE patient or couple,” the latter necessarily including discussion and analysis of possible etiology, duration, generality, and impact on the man, his partner, and their sexual and overall relationship. Specifically, levels of distress are relevant not only to understanding the man's or couple's lived experience of the problem,³⁴ but also to the development of a treatment strategy.^{1,2,4,40} For example, severity of bother/distress/anxiety may guide such decisions as the immediacy and intensity of the treatment, whether treatment should include components of couples/relationship/marital therapy,^{40,41} and whether combined medical and psychosexual therapy might represent an optimal approach.⁴²

Strengths and Limitations

This study was multinational in scope, well powered, multivariate in analysis, relied on standardized items/scales to assess PE, and explored the contribution of bother/distress to PE status through a number of lenses. There were, of course, limitations. Although we implemented best practices for online survey research⁴³ by taking precautions to guarantee anonymity, including attention checks to eliminate cases having inconsistent responses across the survey, not offering incentives, and preventing multiple submissions, online surveys that rely on public/social media for recruitment are subject to biases in education, class, social media access, and other factors. Second, we used the PEDT²³ to assess ejaculatory control; we explained our rationale for using ejaculatory control (as assessed by the PEDT) as an anchor in our analyses, including its strong metrics regarding internal and test-retest reliability (0.82 and 0.85, respectively) and its prior validation for the use in PE diagnoses. However, other assessment tools for PE are also available. Third, we did not use clocked ELs, a procedure that would have been impractical for a study of this magnitude. However, we note that 4 large-scale studies have concluded that estimated and clocked ELs can be used interchangeably^{36,44–46} and indeed, as implied by a fifth analysis, clocked ELs may in some instances offer a less reliable/valid measure of EL, given the well-known principle that “the observer always influences what is being observed.”⁴⁷ Fourth, we used a single item for distress modeled after the validated one in the PEDT,²³ although the language of our item was broadened

to include multiple descriptors. Future studies may benefit from using multi-item assessments for sexual distress in men, although we found only one such instrument and its focus was on prostate cancer rather than sexual dysfunction.⁴⁸ Fifth, we did not differentiate between men having different subtypes of PE, for example, lifelong vs acquired, subclinical PE, etc. At the same time, we note that a number of studies have indicated that PE symptomatology and distress levels are fairly comparable across these subtypes,^{8,10,13,38} although men having concomitant PE and ED may represent a special condition.^{49,50} And finally, we do not presume that our study provides *the* definitive answer regarding the value of bother/distress as a criterion for a PE diagnosis. Rather, we encourage other research teams to carry out well-controlled studies using a variety of methodologies that operationally define and assess both outcome variables and predictor/confounding variables.

CONCLUSION

Bother/distress contributes minimally to the PE diagnosis, yet its assessment may be key to understanding the experiences of the patient/couple and to developing an effective treatment and assessment strategy.

Corresponding Author: David L. Rowland, PhD, Department of Psychology, Valparaiso University, 1400 Campus Drive, Valparaiso, IN 46383, USA. Tel: +1-219-464-5446; E-mail: david.rowland@valpo.edu

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STATEMENT OF AUTHORSHIP

Conceptualization: David L. Rowland, Krisztina Hevesi, Sean M. McNabney; Methodology: David L. Rowland, Krisztina Hevesi; Analysis: David L. Rowland, Sean M. McNabney; Data Curation: David L. Rowland, Krisztina Hevesi; Writing: David L. Rowland, Sean M. McNabney; Writing - Review: David L. Rowland, Sean M. McNabney, Krisztina Hevesi; Visualization: David L. Rowland, Sean M. McNabney.

DATAFILE ACCESS

Interested researchers may make reasonable requests to review the output files from our analyses.

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