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3Measuring decisional certainty among women seeking abortion

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37STRUCTURED ABSTRACT

38Objective

39Evaluating decisional certainty is an important component of medical care, including pre-abortion care.
40However, minimal research has examined how to measure certainty with reliability and validity among
41women seeking abortion. We examine whether the Decisional Conflict Scale (DCS), a measure widely
42used in other health specialties, and considered the gold standard for measuring this construct, and the
43Taft-Baker Scale (TBS), a measure developed by abortion counselors, are valid and reliable for use with
44women seeking abortion and predict the decision to continue the pregnancy.

45Methods

46Eligible women at four family planning facilities in Utah completed baseline demographic surveys and
47scales before their abortion information visit and follow-up interviews three weeks later. For each scale,
48we calculated mean scores and explored factors associated with high uncertainty. We evaluated internal
49reliability using Cronbach's alpha and assessed predictive validity by examining whether higher scale
50scores, indicative of decisional uncertainty or conflict, were associated with still being pregnant at follow-
51up.

52Results

53Five hundred women completed baseline surveys; two-thirds (63%) completed follow-up, at which time
5411% were still pregnant. Mean scores on the DCS (15.5/100) and TBS (12.4/100) indicated low
55uncertainty, with acceptable reliability ($\alpha=0.93$ and 0.72 , respectively). Higher scores on each scale were
56significantly and positively associated with still being pregnant at follow-up in both unadjusted and
57adjusted analyses.

58Conclusion

59The DCS and TBS demonstrate acceptable reliability and validity among women seeking abortion care.

60Comparing scores on the DCS in this population to other studies of decision-making suggests that the
61level of uncertainty in abortion decision-making is comparable to or lower than other health decisions.

62Implications

63The high levels of decisional certainty found in this study challenge the narrative that abortion decision
64making is exceptional compared to other healthcare decisions and requires additional protection such as
65laws mandating waiting periods, counseling, and ultrasound viewing.

66

67Keywords

68Decisional conflict, Decisional uncertainty, Decisional certainty, Abortion

69

701. INTRODUCTION

71 Decisional conflict is defined as a state of uncertainty about a course of action when the choices involve
72 risk, loss, regret, or a challenge to personal values [1]. Assessing and responding to decisional conflict—
73 and its corollary, decisional certainty—is routine in health care, particularly in fields such as obstetrics
74 and oncology where decisions often require balancing complex benefits and risks which are sensitive to
75 patients' preferences and values [2-6].

76 Evaluating how certain a woman is about her decision to obtain an abortion is also an important
77 component of abortion care [7]. However, unlike other health care decisions, many states enforce laws
78 whose stated purpose is to protect women seeking abortion from making an unconsidered decision [8,
79 9]. Implicit in these laws is that women experience more conflict about abortion than other healthcare
80 decisions and require additional time or information beyond that typically offered as part of abortion
81 providers' existing informed consent and counseling practices.

82 Previous research suggests that the majority of women are certain of their abortion decision when they
83 present for care [10-14]. However, minimal research has examined how to effectively measure certainty
84 among women seeking abortion, or how women's certainty about abortion compares to other health
85 decisions. Here, we measure and explore factors associated with decisional certainty among women
86 seeking abortion using both a validated scale used in other health specialties [15] and a scale developed
87 using questions authored by abortion counselors [16]. We assess each scale's psychometric performance
88 in a sample of women seeking abortion in Utah, some of whom decide to continue the pregnancy.
89 Findings may aid providers in their pre-abortion counseling efforts [7] and can be useful in understanding
90 the magnitude of decisional uncertainty among women seeking abortion as compared to other health
91 decisions.

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932. MATERIALS AND METHODS

942.1 Sample and study procedures

95 This study was conducted with English- and Spanish-speaking women ages 15 and older seeking abortion
96 care at four family planning clinics in Utah between October 2013 and April 2014. Adults provided
97 informed consent; minors aged 15 to 17 could participate with parental consent and their own assent.
98 Detailed methods have been described elsewhere[17]. In brief, eligible women were asked to complete
99 a baseline survey on an iPad prior to an abortion information visit and a follow up interview by phone
100 with University of California, San Francisco (UCSF) interviewers three weeks later. Utah requires women
101 seeking an abortion to complete a face-to-face information visit with their provider at least 72 hours
102 before receiving an abortion. During this visit, the provider must read a state-mandated, standardized
103 information script. Clinics in this study also provided pre-abortion counseling during this visit. Thus, all
104 women recruited into the study were presenting for the first of two clinic visits, and would have to
105 return at least 72 hours later for an abortion. Returning for this follow up visit was not a criterion for
106 inclusion in the study. At the time that they completed the baseline survey, women had not yet had any
107 interaction with a health care provider or counselor at the study clinic. The main goal of the overall study
108 was to examine women's reasons for not having an abortion under the 72-hour waiting period and two-
109 visit requirement[17]; thus, we aimed to recruit at least 75 women who completed an abortion
110 information visit but did not return for an abortion. Previous research in a state without a two visit or
111 waiting period requirement found that 7% of women seek but do not obtain an abortion [14]. Prior to
112 the current study, clinic sources estimated that this figure was higher in Utah; thus, we conservatively
113 assumed that 20% would not return for care and 25% would be lost to follow up, requiring an initial
114 sample of 500 women.

115 Participants were remunerated with \$10 for the baseline survey and \$20 for the follow up phone
116 interview. All research activities were approved by UCSF's Committee on Human Research.

117 2.2 Measures

118 The baseline survey assessed women's age, race, employment, educational attainment and education in
119 progress, religious affiliation, and receipt of public assistance. It also included questions about lifetime
120 mental health diagnoses and past year substance use. Women were asked about their relationship status
121 with the man involved in the pregnancy and his awareness of and support for the abortion, as well as
122 who they had talked to about their abortion decision. To capture levels of misperceptions about
123 abortion, women were presented with a series of statements summarizing common abortion myths
124 derived from previous research [18-20] and asked which statement was closer to the truth (e.g.,
125 "abortion causes breast cancer" versus "abortion does NOT cause breast cancer," see Table 1 for all
126 myths presented). Women who incorrectly identified the myth as closer to the truth, or responded
127 "Don't know," were categorized as endorsing that myth. For most women, gestational age at discovery of
128 pregnancy was calculated using the time elapsed between self-reported date of last menstrual period
129 and date they discovered pregnancy. For a minority of women who could not recall these dates, women
130 were asked about how many weeks or months ago these events occurred.

131 The baseline survey included two scales designed to measure decisional certainty. The Decisional
132 Conflict Scale (DCS) is a validated scale used to assess individuals' perceptions of uncertainty in the
133 context of healthcare decisions and to identify modifiable factors contributing to uncertainty [15]. It
134 includes 16 items that can be scored in aggregate or as five subscales (Uncertainty, Informed, Values
135 Clarity, Support, and Effective Decision). Women were asked their level of agreement (ranging from
136 Strongly Agree to Strongly Disagree) for all items (see Figure 1a). One previous cross-sectional study used

137this scale to assess decisional certainty among women who had an abortion in Portugal, and found low
138conflict post-abortion [21].

139The second, 4-item scale is from a needs assessment form found in a widely disseminated textbook on
140abortion care [16]. The original form contains 16 items developed by abortion counselors and designed
141to be self-administered to aid providers in pre-abortion counseling. Previous studies have used the
142responses to four of these items to classify women's confidence in their decision [14, 22, 23]. Similar to
143the DCS, women are asked their level of agreement with each item (See Figure 1B). Based on input from
144the instrument creators, we refer to this scale as the Taft-Baker Scale (TBS) throughout the present
145analysis.

146The follow up phone interview included the closed-ended question "Have you had an abortion since you
147visited [clinic] on [date]?" We classified women as still pregnant if they responded "No" to this question.
148Women who experienced a miscarriage or discovered that they were not pregnant between baseline
149and follow up were excluded from the follow up sample for this analysis.

1502.3 Statistical Analyses

151We calculated a summary score on the DCS overall and each subscale using guidance from the scale
152authors [24] and consistent with previous literature; this involved summing responses across items
153(where 0=strongly agree, 1= agree, 2= neither agree or disagree, 3=disagree, and 4=strongly disagree),
154and transforming scores to range from 0 to 100. Lower scores reflect lower levels of decisional
155uncertainty. A similar approach was employed to calculate a summary score on the TBS. To ensure that a
156lower score on each item was reflective of lower certainty, we reverse coded two TBS items (#3 and #4,
157see Figure 1B). We examined the distribution of scale scores for normality and missingness, and
158calculated summary statistics on each measure including mean, median, standard deviation, and range.
159We present the median and range given the non-normal distribution of scores. We also present the

160mean and standard deviation, in order to allow for direct comparisons between mean DCS score in our
161study population and how it was presented in other studies.

162To compare agreement in responses on the two scales, we computed Cohen's kappa statistics (k) with
16395% confidence intervals. Scores on each scale were dichotomized to isolate individuals scoring above
164the 90th percentile. We considered kappa ≥ 0.2 as evidence of fair agreement, ≥ 0.4 as moderate
165agreement, ≥ 0.6 as substantial agreement, and ≥ 0.8 as almost perfect agreement [25]. In addition, we
166constructed two multivariate logistic regression models to predict scoring above the 90th percentile on
167each scale.

168We used Wilcoxon-Mann-Whitney tests to examine whether scores differed between women who
169completed a follow up interview and those who were lost to follow up. A more extensive attrition
170analysis on this data has been described elsewhere [17].

1712.3.1 Reliability

172The internal consistency of each scale was evaluated using Cronbach's α . A threshold of $\alpha=0.70$ was
173considered evidence of acceptable reliability [26].

1742.3.2 Validity

175To examine group validity, we used Wilcoxon-Mann-Whitney and Kruskal-Willis tests to evaluate if scores
176differed between groups we hypothesized *a priori* would vary based on previous literature. For example,
177given studies suggesting that women who lack social support for their decision are more likely to
178anticipate difficulty coping post-abortion [22, 27], we hypothesized that male partner's awareness of and
179support for the abortion would influence women's uncertainty. We also hypothesized that younger
180women and those with misinformation about the safety or long term health effects of abortion would
181express more uncertainty.

182 We assessed predictive validity in two ways. First, for both the DCS and TBS, we compared scale
183 distributions between women who were still pregnant at follow up and those who received an abortion
184 using Wilcoxon-Mann-Whitney tests. Second, we explored the performance of the DCS subscales and the
185 TBS in predicting still being pregnant at follow up using multivariate logistic regression models, extending
186 our previous work that found that a higher score on the DCS scale (i.e. more uncertainty) was
187 significantly and positively associated with still being pregnant at follow up [17]. We conducted all
188 analyses using Stata 14.0 (College Station, TX) [28].

189

1903. RESULTS

191 Among 683 eligible women approached to participate, 500 completed a baseline survey at the beginning
192 of their abortion information visit, for a response rate of 73%. Nearly two-thirds (n=309, 62%) completed
193 a follow up phone interview. The mean duration between baseline and follow up survey was 25.7 days. A
194 small minority (n=8, 3%) discovered that they were not pregnant or experienced a miscarriage by the
195 follow up interview and were excluded from subsequent analyses as they no longer had a decision to
196 make about the pregnancy. The majority (n=267, 89%) of those remaining had had an abortion by the
197 follow up phone interview.

198 Study participants were predominantly white (68%) and Hispanic/Latina (22%). The average age was
199 25.6, and one-half (50%) were nulliparous. One-third (32%) reported receiving public assistance in the
200 last year. Three-quarters (76%) were employed or in school. Most (67%) were in a relationship with or
201 married to the man involved in their pregnancy. Almost half (45%) reported being religiously affiliated
202 (Table 1).

2033.1 Decisional Conflict Scale

204At baseline, 492 women completed all 16 items of the DCS. Scores on the DCS were heavily skewed
205toward low conflict scores and were not normally distributed. The median score was 9.4, and ranged
206from 0 to 68.8. The mean score was 15.5 (standard deviation (SD)=15.2). There were no differences in
207mean DCS score according to whether or not women completed a follow up interview ($p=0.558$, Table 2).

208Cronbach's alpha for the DCS overall was 0.93, suggesting high internal consistency. Each subscale of the
209DCS also had acceptable internal reliability, with Cronbach's α ranging from 0.75 for the Uncertainty
210Subscale to 0.92 for the Values Clarity subscale (Table 2).

211With respect to the individual items comprising the DCS scale, women scored highest (reflecting more
212uncertainty) on the item "This decision is easy for me to make" (mean = 1.55, SD=1.44). This was the
213only item for which less than half of women (34%) strongly agreed with the statement. Women scored
214lowest (reflecting less uncertainty) on the items "I know which options are available to me" (mean =
2150.31, SD=0.54) and "I expect to stick with my decision" (mean=0.40, SD=0.63, data not shown, see Figure
2161a for response distributions to all items).

217Mean DCS scores differed between women who were still pregnant at follow up and those that received
218abortion care (28.5 and 13.8, $p<0.000$) (Table 2). In a multivariate model, a higher score on the
219Uncertainty subscale was significantly and positively associated with being pregnant at follow up
220(adjusted OR = 1.04, 95% CI: 1.00, 1.08 (Table 3).

221Mean scores on the DCS were significantly higher, indicating more conflict, among women ages 19 and
222under as compared to women ages 20 and older (20.5 vs. 14.6, $p=0.005$). Finally, mean DCS scores also
223increased significantly with the number of abortion myths endorsed by women, from a low of 5.8 among
224women endorsing zero myths to 21.1 among women endorsing four myths presented ($p=0.0001$, Table
2252).

2263.2 Taft-Baker Scale

227At the baseline interview, 484 women completed all four items of the TBS. Similar to the DCS, scores
228were heavily skewed toward low uncertainty scores and were not normally distributed. The median
229score was 6.3 and ranged from 0 to 56.3. The mean score was 12.4 (standard deviation=14.7). There
230were no differences in mean TBS score according to whether women completed a follow up interview
231($p=0.923$, Table 2).

232The reliability of the TBS was acceptable according to Cronbach's alpha ($\alpha= 0.72$) (Table 2).

233Mean TBS scores differed between women who were still pregnant at follow up and those that received
234an abortion (mean = 24.4 and 10.8, $p<0.000$) (Table 2). In a multivariate model, higher TBS score was
235significantly and positively associated with still being pregnant at follow up (adjusted OR = 1.07, 95% CI:
2361.03, 1.09).

237TBS scores also differed according to women's age, with women aged 19 and under scoring higher than
238women aged 20 and older (16.4 vs. 11.7, $p=0.003$). There were no significant differences in mean scale
239scores according to partner involvement and support. Similar to the DCS, women who endorsed a larger
240number of abortion myths also scored higher on the TBS (Table 2).

2413.3 Agreement on scale scores

242Dichotomized scale scores at the 90th percentile demonstrated moderate agreement in responses
243between scales ($k=0.51$, 95%CI=0.39, 0.63). The majority of women (84%) had scores reflecting low
244uncertainty on both scales. However, a subset of women (10%) had discordant DCS and TBS scores, and
2456% had scores reflecting high uncertainty on both scales.

246In multivariate analyses, women's age, endorsement of abortion myths, and religious affiliation were
247associated with scoring above the 90th percentile on the DCS. Age and endorsement of abortion myths
248were associated with scoring above the 90th percentile on the TBS. Specifically, women ages 35 and older
249were less likely to have scores reflecting high conflict for the DCS (aOR=0.20, 95% CI:0.04, 0.91) and TBS
250(aOR=0.11, 95% CI:0.01, 0.88) as compared to women ages 25 to 34. For each additional abortion myth
251endorsed, women were more likely to score above the 90th percentile on the DCS (aOR=1.92, 95% CI:
2521.40, 2.62) and TBS (aOR=1.71, 1.23, 2.38). Finally, compared to women who reported no religious
253affiliation, women who reported being Mormon were significantly more likely to have scores reflecting
254high conflict on the DCS (aOR=2.71, 1.32, 5.54).

255

2564. DISCUSSION

257Much of the discourse around abortion policy suggests that abortion decision-making is exceptional
258compared to other healthcare decisions [29], and thus requires additional protection by targeted laws
259such as mandated waiting periods, information scripts, and ultrasound viewing requirements. Levels of
260decisional uncertainty in this study as measured by the DCS (mean score (μ) = 15.5) were comparable to
261or lower than those found in other studies of women making healthcare decisions, such as mastectomy
262after a breast cancer diagnosis (DCS μ = 17.4)[30], prenatal testing after infertility (DCS μ =22.1)[31], or
263antidepressant use during pregnancy (DCS μ = 26.2)[32]. They are also lower than levels observed in
264studies of men and women making decisions about reconstructive knee surgery (DCS μ = 37.4-42.7)[33]
265or men deciding on prostate cancer treatment options (DCS μ =35.7)[34]. Thus, our findings challenge
266these laws' implicit characterization of women making abortion decisions—as compared to other
267healthcare decisions—as particularly conflicted.

268Our results are also consistent with previous research [10-14] indicating that the majority of women are
269certain of their decision when they present for abortion care. A unique contribution of our study is that,
270unlike previous research, we measured decisional certainty using two scales, one of which has been
271extensively validated and is considered to be the gold standard for measuring this construct across
272diverse health domains [35], and the other of which was developed by abortion providers explicitly for
273counseling purposes. Despite their different origins, both scales performed well in psychometric
274analyses, indicating their appropriateness for use among women seeking abortion care and ability to
275distinguish the minority of women who may benefit from additional support and clinic resources.

276Comparing scores between the DCS and TBS suggests that the two scales are capturing similar but not
277identical constructs. The 16 items in the DCS may permit exploration into more nuanced aspects of the
278decision-making process that are not captured in the 4-item TBS. The item on the DCS that women had
279the most difficult time agreeing with was "*This decision is easy for me to make.*" This is consistent with
280previous research in which over one-half of women who had an abortion retrospectively report that
281their decision was either somewhat or very difficult [36]. Importantly, difficulty deciding does not
282necessarily translate into continuing the pregnancy, as 4 in 5 women in our study who disagreed with
283the statement that the decision was easy had had an abortion at follow up. Further, the majority (85%)
284of those who disagreed that the decision was easy also agreed with the statement that abortion was the
285better choice for them. This suggests that, as has been found in other research, women can
286simultaneously acknowledge that their abortion decision was not easy and that they are confident it was
287the right decision for them [36].

288Our study found that women who endorsed a greater number of myths about abortion were more likely
289to express uncertainty about their decision. Importantly, our study is not able to disentangle the
290temporal relationship between these variables. It is plausible that women who are more conflicted

291about their decision seek out or internalize negative information about abortion in their environment
292[37, 38] more readily than those who are certain of their decision. Alternatively, endorsement of myths
293about abortion, or, more broadly, holding negative attitudes toward abortion, could introduce
294uncertainty into women's decision-making. In our study, myth endorsement and decisional certainty
295were assessed prior to any interaction with a provider at the study clinic. Future research should
296examine how the subsequent patient-provider interaction influences women's myth endorsement and
297certainty, including heterogeneity in effects when providers must cover mandated information scripts
298that contain scientifically inaccurate or misleading information about abortion [39].

299This study had several limitations. Our sample was limited to women seeking abortion care in four Utah
300facilities, and as a result differed from the national profile of women seeking abortion[40] in several
301respects. First, adolescent women were underrepresented here (6%) as compared to nationally (18%).
302Thus, our finding that adolescent women score higher on each scale merits additional exploration with a
303larger and more representative sample of young women. Second, Utah's population, and therefore our
304study population, has an overrepresentation of Mormon women and underrepresentation of African-
305American women seeking abortion as compared to national profiles. Interestingly, the larger sample of
306Mormon women allowed us to identify significant differences in levels of decisional certainty by religious
307affiliation, with Mormon women more likely to have high uncertainty as compared to women reporting
308no religious affiliation. Additional exploration by not only religious denomination, but also religiosity,
309would provide a more complete assessment of the role of religion. Finally, approximately one-third of
310our sample did not complete a follow up interview, and our results might be biased if those with high
311uncertainty were more likely to be lost to follow-up. However, there was no evidence of differential
312attrition by DCS or TBS score, reducing the likelihood of this bias.

313 Moving forward, this study should give confidence to providers who want to use validated scales to
314 assess their patient's decisional certainty as part of pre-abortion counseling or informed consent. For
315 example, the TBS could be used as an initial screening tool to identify the minority of women who are
316 uncertain of their decision. The DCS and its subscales could then be administered to this subset of
317 women to identify specific factors contributing to that uncertainty, supporting providers in their efforts
318 to provide patient-centered counseling and care [41, 42].

319

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326Conflicts of Interest

327David Turok is the director of surgical services for Planned Parenthood Association of Utah.

328

329REFERENCES

- 330[1] Janis I, Mann L. Decision Making - Psychological basis for definig the construct. New York: The Free
331Press; 1977.
- 332[2] Lau YK, Caverly TJ, Cao P, et al. Evaluation of a Personalized, Web-Based Decision Aid for Lung Cancer
333Screening. *Am J Prev Med* 2015;49:e125-9.
- 334[3] Meade T, Dowswell E, Manolios N, Sharpe L. The motherhood choices decision aid for women with
335rheumatoid arthritis increases knowledge and reduces decisional conflict: a randomized controlled trial.
336*BMC Musculoskelet Disord* 2015;16:260.
- 337[4] Collins ED, Moore CP, Clay KF, et al. Can women with early-stage breast cancer make an informed
338decision for mastectomy? *J Clin Oncol* 2009;27:519-25.
- 339[5] Hollinghurst S, Emmett C, Peters TJ, et al. Economic evaluation of the DiAMOND randomized trial:
340cost and outcomes of 2 decision aids for mode of delivery among women with a previous cesarean
341section. *Med Decis Making* 2010;30:453-63.
- 342[6] Mersereau JE, Goodman LR, Deal AM, Gorman JR, Whitcomb BW, Su HI. To preserve or not to
343preserve: how difficult is the decision about fertility preservation? *Cancer* 2013;119:4044-50.
- 344[7] Gould H, Perrucci A, Barar R, Sinkford D, Foster DG. Patient education and emotional support
345practices in abortion care facilities in the United States. *Women Health Iss* 2012;22:e359-64.
- 346[8] Guttmacher Institute. State Policies in Brief: An Overview of Abortion Laws. 2015.
- 347[9] Boonstra H, Nash E. A surge of state abortion restrictions puts providers - and the women they serve -
348in the crosshairs. *Guttmacher Policy Review* 2014;17:9-15.
- 349[10] Kumar U, Baraitser P, Morton S, Massil H. Decision making and referral prior to abortion: a
350qualitative study of women's experiences. *J Fam Plann Reprod Health Care* 2004;30:51-4.
- 351[11] Goenee MS, Donker GA, Picavet C, Wijssen C. Decision-making concerning unwanted pregnancy in
352general practice. *J Fam Pract* 2014;31:564-70.

- 353[12] Gatter M, Kimport K, Foster DG, Weitz TA, Upadhyay UD. Relationship between ultrasound viewing
354and proceeding to abortion. *Obstet Gynecol* 2014;123:81-7.
- 355[13] Cameron ST, Glasier A. Identifying women in need of further discussion about the decision to have
356an abortion and eventual outcome. *Contraception* 2013;88:128-32.
- 357[14] Foster DG, Gould H, Taylor J, Weitz TA. Attitudes and decision making among women seeking
358abortions at one U.S. clinic. *Perspect Sex Reprod Health* 2012;44:117-24.
- 359[15] O'Connor AM. Validation of a decisional conflict scale. *Med Decis Making* 1995;15:25-30.
- 360[16] Management of unintended and abnormal pregnancy: Comprehensive abortion care. West Sussex,
361UK: Blackwell Publishing Ltd; 2009.
- 362[17] Roberts SCM, Turok DK, Belusa E, Combellick S, Upadhyay UD. Utah's 72-Hour Waiting Period for
363Abortion: Experiences Among a Clinic-Based Sample of Women. *Perspect Sex Reprod Health* 2016; Epub
3642016 March 24.
- 365[18] Bessett D, Gerdtts C, Littman LL, Kavanaugh ML, Norris A. Does state-level context matter for
366individuals' knowledge about abortion, legality and health? Challenging the 'red states v. blue states'
367hypothesis. *Cult Health Sex.* 2015;17:733-46.
- 368[19] Littman LL, Jacobs A, Negron R, Shochet T, Gold M, Cremer M. Beliefs about abortion risks in women
369returning to the clinic after their abortions: a pilot study. *Contraception* 2014;90:19-22.
- 370[20] Wiebe ER, Littman L, Kaczorowski J, Moshier EL. Misperceptions about the risks of abortion in
371women presenting for abortion. *J Obstet Gynaecol Can* 2014;36:223-30.
- 372[21] Sereno S, Leal I, Maroco J. The Role of Psychological Adjustment in the Decision-making Process for
373Voluntary Termination of Pregnancy. *J Reprod Infertil* 2013;14:143-51.
- 374[22] Foster DG, Gould H, Kimport K. How women anticipate coping after an abortion. *Contraception*
3752012;86:84-90.

- 376[23] Ralph L, Gould H, Baker A, Foster DG. The role of parents and partners in minors' decisions to have
377an abortion and anticipated coping after abortion. *J Adolesc Health* 2014;54:428-34.
- 378[24] O'Connor AM. User Manual - Decisional Conflict Scale (16 item statement format) Ottawa: Ottawa
379Hospital Research Institute; 1993.
- 380[25] Viera AJ, Garrett JM. Understanding interobserver agreement: the kappa statistic. *Fam Med*
3812005;37:360-3.
- 382[26] Bland JM, Altman DG. Statistics notes: Cronbach's alpha. *BMJ (Clinical research ed)*. 1997;314:572.
- 383[27] Kapadia F, Finer LB, Klukas E. Associations between perceived partner support and relationship
384dynamics with timing of pregnancy termination. *Women Health Iss* 2011;21:S8-13.
- 385[28] StataCorp. *Stata Statistical Software: Release 14*. College Station, TX: StataCorp LC; 2015.
- 386[29] Watson K. A piece of my mind. Reframing regret. *JAMA* 2014;311:27-9.
- 387[30] King L, O'Neill SC, Spellman E, Peshkin BN, Valdimarsdottir H, Willy S, et al. Intentions for bilateral
388mastectomy among newly diagnosed breast cancer patients. *J Surg Oncol* 2013;107:772-6.
- 389[31] Caleshu C, Shiloh S, Price C, Sapp J, Biesecker B. Invasive prenatal testing decisions in pregnancy
390after infertility. *Prenat Diagn* 2010;30:575-81.
- 391[32] Walton GD, Ross LE, Stewart DE, Grigoriadis S, Dennis CL, Vigod S. Decisional conflict among women
392considering antidepressant medication use in pregnancy. *Arch Womens Ment Health* 2014;17:493-501.
- 393[33] de Achaval S, Fraenkel L, Volk RJ, Cox V, Suarez-Almazor ME. Impact of educational and patient
394decision aids on decisional conflict associated with total knee arthroplasty. *Arthritis Care Res*
3952012;64:229-37.
- 396[34] Johnson DC, Mueller DE, Deal AM, Dunn MW, Smith AB, Woods ME, et al. Integrating patient
397preferences into treatment decisions for men with prostate cancer at the point of care. *J Urol* 2016. Epub
3982016 Jun 23.

399[35] Ferron Parayre A, Labrecque M, Rousseau M, Turcotte S, Legare F. Validation of SURE, a four-item
400clinical checklist for detecting decisional conflict in patients. *Med Dec Making* 2014;34:54-62.

401[36] Rocca CH, Kimport K, Gould H, Foster DG. Women's emotions one week after receiving or being
402denied an abortion in the United States. *Perspect Sex Reprod Health* 2013;45:122-31.

403[37] Sisson G, Kimport K. Facts and fictions: Characters seeking abortion on American television, 2005-
4042014. *Contraception* 2016;93:446-51.

405[38] Norris A, Bessett D, Steinberg JR, Kavanaugh ML, De Zordo S, Becker D. Abortion stigma: a
406reconceptualization of constituents, causes, and consequences. *Women Health Iss* 2011;21:S49-54.

407[39] Daniels CR, Ferguson J, Howard G, Roberti A. Informed or Misinformed Consent? Abortion Policy in
408the United States. *J Health Polit Policy Law*. 2016;41:181-209.

409[40] Jones RK, Finer LB, Singh S. *Characteristics of U.S. Abortion Patients, 2008*. New York, NY:
410Guttmacher Institute; 2010.

411[41] Dobkin LM, Perrucci AC, Dehlendorf C. Pregnancy options counseling for adolescents: overcoming
412barriers to care and preserving preference. *Curr Probl Pediatr Adolesc Health Care* 2013;43:96-102.

413[42] Sepucha KR, Fowler FJ, Jr., Mulley AG, Jr. Policy support for patient-centered care: the need for
414measurable improvements in decision quality. *Health Aff* 2004;Suppl Variation:VAR54-62.

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