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## **Sexual health care in prostate cancer for men and their partners**

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# Chapter 7



# Investigating the effect of a symposium on sexual health care in prostate cancer among Dutch healthcare professionals

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## Introduction

In prostate cancer (PCa), sexual dysfunction (SD) is often a consequence of its treatment with erectile dysfunction (ED) as one of the most prevalent reported side effects (67, 68). The prevalence of treatment-related ED may vary from 37% to 63%, depending on type of treatment and pre-treatment erectile function (69). Moreover, SD caused by PCa treatment can have a negative effect on quality of life (70). Considering the increase of relative survival rates to 89%, information provision on possible development of SD is important (71, 72).

## Background

Unmet needs on information provision and discontent regarding sexual health counseling are frequently reported (73-76). Forbat et. al observed that in 60 consultations between clinicians and British PCa patients and their partners SD was mentioned in only half of the consultations (42). The topic was primarily initiated by healthcare professionals, seldom by patients and never by partners. Nevertheless, 85% of men stated that they wanted to discuss SD with their physician, however 71% doubted whether their physician would be responsive to their questions (77).

Similarly, SD is not frequently discussed by healthcare professionals; lack of knowledge and training are two of the most often reported barriers (66, 78). Lack of knowledge and need for training are recurring themes in the literature, thus providing additional training could improve knowledge and competence of healthcare professionals in order to provide adequate sexual health care (79, 80). Remarkably, Dutch urology residents merely have one course about sexual health during their residency (81). As to the nursing program, sexual health counseling is a skill of which the nurse is thought to be capable of, yet not a mandatory component within their curricula (82). To date, there is no research published on the possible effect of symposia concerning sexual health counseling among healthcare professionals.

The aim of this study is to investigate whether a symposium that consists of lectures, casuistry and two workshops with sexuality and intimacy after uro-oncological treatment as main topic, improves knowledge, competence and general practice as to PCa-related of healthcare professionals. Furthermore, to determine which possible barriers are encountered in sexual health care and which tools are needed to address sexual health in men experiencing SD after PCa treatment.

## **Methods**

### **Study population**

In April 2016, a one-day symposium with sexuality and intimacy after uro-oncological treatment as main topic was held in Amersfoort, the Netherlands. The symposium was intended for medical doctors (MDs); in particular urologists and urology residents, nurses and other healthcare professionals with an interest in the topic. Attending this symposium was based on voluntary participation. The symposium was accredited by NVU (Dutch Association for Urology), NVRO (Dutch Society for Radiotherapy and Oncology), NIV (Dutch Association for Internal Medicine), NVVS (Dutch Society for Sexology), Dutch Register for Nurses and Nurse Practitioners (Kwaliteitsregister V&V and VSR) and NAPA (Dutch Association for Physician Assistants). Attendees were recruited through publicity of organizations in the area of uro-oncology and sexology. The symposium started with lectures on the effect of PCa on sexuality and intimacy, followed by lectures on SD after several types of PCa treatments (using case studies of fictitious patients). In the afternoon, participants attended two workshops focusing on counseling techniques and tools to address SD in uro-oncological patients.

### **Study design**

Two questionnaires were used in this pre-post study, a STROBE checklist was completed (STROBE Statement—checklist of items that should be included in reports of observational studies). The first questionnaire was used to determine knowledge, competence and general practice at the time of the symposium (T0). The second questionnaire was sent six months after the symposium (T1) in order to perform repeated measures to analyze alterations in knowledge, competence and general practice. The questionnaire, with an informational letter and a post-paid envelope appended, was distributed to the attendees at the end of the symposium. Healthcare professionals whom did not treat men with PCa were excluded. At the end of the questionnaire, the participant was asked whether participation to engage in the second part of the study was desired. With affirmative consent, personal details were obtained. After six months, the second questionnaire was sent. A reminder was emailed four weeks after initial mailing to the participants whom gave affirmative consent, yet had not returned the second questionnaire.

### **Materials; two questionnaires**

The first questionnaire was developed by the authors based on aim of this study. A multiple-choice question was incorporated at the beginning of the questionnaire to assess potential reason to decline participation: non-interest, lack of experience, improvement in this area to be irrelevant or not being involved within treatment of men with PCa. Based on the type of respondents from the first questionnaire, the authors developed a second questionnaire. Accordingly, three different questionnaires were developed aimed at (1)

MDs, (2) (specialized) nurses together with physician assistants (PAs) and (3) sexologists. No validated questionnaires were used due to the specific nature of this study. The first questionnaire contained single and multiple answer questions concerning demographic characteristics, previously attended additional sexual health training, barriers to discuss SD and tools that could aid addressing SD in routine consultations. Self-reported levels of knowledge were assessed with a 5-point Likert scale, ranging from 'no knowledge' to 'much knowledge'. Discussing SD and rate of referral were determined throughout 5-point Likert scales, ranging from '(almost) never' to '(almost) always'. Self-reported competence was established by identifying three different areas in competence: discussing sexual function (SF), advising on SD and actively inquiring sexual complaints, whereas the participant could opt by means of polar questions. The second questionnaire comprised the same subjects as the first questionnaire, yet focused on possible alterations within the aforementioned subjects. MDs, (specialized) nurses and PAs were asked reasons why they changed or did not change general practice through multiple answer questions with the option to provide a written answer if none of the given answers were applicable.

### **Statistics**

Analysis was carried out using SPSS Statistics version 23. Demographic characteristics, attended additional sexual health training, self-reported knowledge, competence, general practice, barriers and tools were described using frequency tables. Numerical variables were described using means with standard deviations, categorical data were described with number and percentage. Associations within categorical variables (type of healthcare professional, having attended additional sexual health training, competence, general practice and tools) were analyzed using the Pearson's Chi-squared test and the Fisher's Exact test. Correlations within categorical data (having attended additional sexual health training and general practice) and ordinal data (knowledge on PCa-related SD or its treatment and general practice) were analysed using the Kruskal Wallis test. In order to analyse changes in self-reported knowledge, competence and general practice, answers were dichotomized based on nearly equal distribution and alterations were calculated using the McNemar's test. For analysis based on type of healthcare professional, the authors divided (specialized) nurses and PAs into two different groups; (1) nurses and (2) specialized nurses (SNs) together with PAs, since SNs/PAs have received more specialized training and therefore knowledge, competence and general practice may differ. Results were considered to be significant if two-sided p values were  $<0.05$ .

### **Ethical considerations**

This study did not fall under the scope of the Medical Research Involving Human Subjects Act, hence no ethical approval was required. Confidentiality issues were dealt with according to the Dutch law (Personal Data Protection Act).

## Results

Out of 115 healthcare professionals whom attended the symposium, 61 questionnaires were returned. Five attendees indicated they did not treat men with PCa. Accordingly, a total of 56 questionnaires were analyzed. One participant was a social worker and due to the specific nature of her occupation, she could not be categorized into a certain type of healthcare professional and was therefore excluded.

**Table 1.** Demographic characteristics (n = 55).

	n (%)
<b>Gender</b>	
Male	8 (14.5)
Female	47 (85.5)
<b>Age (years)</b>	
Mean (SD)	48.3 (± 10.1)
<b>Employment setting</b>	
University hospital	4 (7.3)
District teaching hospital	13 (23.6)
District hospital	30 (54.5)
Cancer institute	1 (1.8)
Private clinic	1 (1.8)
Own practice	10 (18.2)
Other <sup>a</sup>	5 (9.1)
<b>Experience in current employment setting (years)</b>	
<1	3 (5.5)
1 – 2	6 (10.9)
3 – 5	6 (10.9)
6 – 10	21 (38.2)
11 – 15	7 (12.7)
>15	12 (21.8)
<b>Occupation</b>	
Medical doctors (n = 6) <sup>b</sup>	
Nurses (n = 34) <sup>c</sup>	
Specialized nurses and physician assistants (n = 6) <sup>d</sup>	
Sexologists* or sexological care providers (n = 9) <sup>e</sup>	

\* Sexologists: registered psychotherapists, physicians and psychologists with a master's degree from a University of Professional Education or a University of Science focused on sexuality.

a. Including revalidation centers (n = 2), mental health centers (n = 2) and a pelvic floor center (n = 1)

b. Including urologists (n = 4) and urology residents (n = 2)

c. Including uro-oncology nurses (n = 12), urology nurses (n = 8), uro-continenence nurses (n = 2), uro-oncology-continenence nurses (n = 2), continence-stoma nurses (n = 2),

uro-oncology-continenence-stoma nurse (n = 1), oncology nurse (n = 1), oncology-continenence nurse (n = 1), oncology-continenence nurse (n = 1) and a continence nurse (n = 1)

d. Including specialized nurses (n = 4), physician assistants (n = 2)

e. Including sexologists (n = 3), pelvic physiotherapist-sexologists (n = 3), general practitioner-sexologist (n = 1), psychologist-sexologist (n = 1) and systemtherapist-sexologist (n = 1)



The 55 participants whom responded to the first questionnaire, were categorized in four main groups based on their profession: MDs, consisting of urologists and urology residents (n = 6), nurses (n = 34), SNs/PAs (n = 6) and sexologists (n = 9). Demographic characteristics are presented in Table 1.

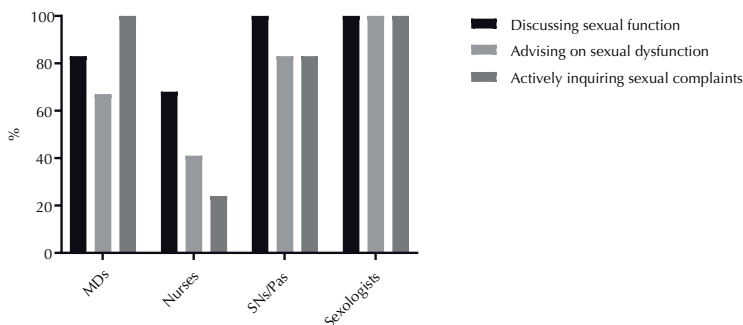
Out of 55 participants, 50 individuals gave affirmative consent to engage in the second part of the study; 41 questionnaires were sent back and analyzed. This group consisted of five MDs, twenty-six nurses, two SNs/PAs and eight sexologists.

### Knowledge, competence and general practice at the time of the symposium

The majority (72.7%, n = 40) stated that not enough attention was paid to PCa-related SD during their education, including all MDs. Seventy-one percent (n = 39) had attended additional sexual health training in the past of which attending seminars and/or symposia was reported the most (69.2%). Participants who had attended additional sexual health training had significantly more knowledge on PCa-related SD compared to participants who had not attended additional sexual health training (p = 0.01). No significant difference was found in knowledge concerning treatment of PCa-related SD (p = 0.08).

Participants felt most competent in discussing SF (78.2%), followed by advising on SD (58.2%) and actively inquiring sexual complaints (50.9%). Having attended additional sexual health training in the past, had no significant effect on competence in discussing SF, advising on SD nor in actively inquiring sexual complaints. Out of all healthcare professionals, nurses consistently indicated to feel the least competent on all aspects, with the lowest percentage on actively inquiring sexual complaints (23.5%). Nurses felt significantly less competent in discussing SF (p <0.05), advising on SD (p <0.01) and actively inquiring sexual complaints (p <0.01) compared to other healthcare professionals, see Figure 1.

**Figure 1. Competence per healthcare professional.**



**Table 2.** Alterations in knowledge, competence and general practice before and after the symposium.

	T0a n (%)	T0b n (%)	T1 n (%)	p-value <sup>a,b</sup>
<b>Knowledge of sexual dysfunction<sup>c</sup></b>				
No knowledge	-	-	-	0.73
Little knowledge	3 (5.5)	3 (8.6)	-	
Some knowledge	14 (25.5)	11 (31.4)	12 (34.3)	
Sufficient knowledge	26 (47.3)	13 (37.1)	17 (48.6)	
Much knowledge	12 (21.8)	8 (22.9)	6 (17.1)	
<b>Knowledge of treatment of sexual dysfunction<sup>c</sup></b>				
No knowledge	1 (2.8)	1 (2.9)	-	0.39
Little knowledge	8 (22.2)	8 (22.9)	-	
Some knowledge	13 (36.1)	12 (34.3)	18 (50.0)	
Sufficient knowledge	9 (25.0)	9 (25.7)	14 (38.9)	
Much knowledge	5 (13.9)	5 (14.3)	4 (11.1)	
<b>Competence§</b>				
Competence in discussing sexual function	43 (78.2)	18 (66.7)	8 (29.6)	0.25
Competence in advising on sexual dysfunction	32 (58.2)	14 (51.9)	6 (22.2)	0.25
Competence in actively inquiring sexual complaints	28 (50.9)	8 (29.5)	9 (33.3)	0.50
<b>Discussing sexual dysfunction<sup>c</sup></b>				
(Almost) never	10 (18.2)	5 (17.9)	3 (10.7)	<0.01
Less than half of cases	4 (6.6)	2 (7.1)	2 (7.1)	
Half of cases	5 (9.1)	3 (10.7)	2 (7.1)	
More than half of cases	11 (20.0)	9 (32.1)	2 (7.1)	
(Almost) always	25 (41.0)	9 (32.1)	19 (67.9)	
<b>Referring to sexologist or specialized health care professional<sup>c</sup></b>				
(Almost) never	31 (58.5)	18 (52.9)	16 (47.1)	0.75
Less than half of cases	19 (35.8)	14 (41.2)	14 (41.2)	
Half of cases	2 (3.8)	2 (5.9)	3 (8.8)	
More than half of cases	-	-	-	
(Almost) always	1 (1.9)	-	1 (2.9)	

T0a: at the time of the symposium (all participants), T0b: at the time of the symposium (participants whom also answered at T1), T1: six months after the symposium.

n differs due to question routing or participants whom abstained from responding to the question.

a. P-values are based on paired data of T0b and T1, participants whom did not fill in a second questionnaire were excluded from this analysis.

b. Analysis was performed using McNemar's test.

c. T1 displays the participants who felt more competent after the symposium, based on the assumption that participants could not shift from feeling competent at T0 to not feeling competent at T1.

The majority of the participants (65.5%, n = 36) reported to discuss SD in 'more than half of the cases' to '(almost) always' (Table 2). No significant differences were found in the frequency of discussing SD between MDs, nurses, SNs/PAs and sexologists. Eighty percent of the nurses and SNs/PAs (n = 27) indicated referrals are well regulated. However, 94.1% (n = 32) referred men experiencing treatment-related SD in 'less than half of the cases' to '(almost) never' to a sexologist or a specialized healthcare

professional. Seventy-five percent of the sexologists indicated to receive men with treatment-related SD in less than 10% of the cases, whilst 62.5% (n = 5) reported to have 'sufficient' to 'much knowledge' concerning medically induced SD and 75.0% (n = 6) reported to have 'sufficient knowledge' on ED treatment methods.

### **Knowledge, competence and general practice after the symposium**

The frequency of discussing SD was significantly higher after the symposium when compared to before the symposium ( $p < 0.01$ ). No significant effects were found on knowledge on SD ( $p = 0.73$ ), knowledge on treatment of SD ( $p = 0.39$ ), competence in discussing SF ( $p = 0.25$ ), advising on SD ( $p = 0.25$ ), actively inquiring sexual complaints ( $p = 0.50$ ), and rate of referral ( $p = 0.75$ ). Among all healthcare professionals, nurses and SNs/PAs were the only participants who felt more competent after the symposium. Further details on changes in knowledge, competence and general practice are displayed in Table 2. MDs, nurses and SNs/PAs were asked whether their general practice in PCa-related SD changed after the symposium. Almost 55% (n = 18) answered positively; the most reported changes included discussing sexuality more frequently (63.2%), providing more information (47.4%) and engaging the partner more often (36.8%). Fifteen participants (45.5%) answered negatively to this question, since they believed that their general practice already met quality standards (73.3%). Nurses and SNs/PAs were asked if sufficient possibilities were available to offer sexual health counseling; the majority (78.6%, n = 22) agreed. The reported reasons therefore concerned enough time (54.5%), adequate knowledge (50.0%) and sufficient support from the medical staff (45.5%).

### **Encountered barriers and tools to address SD in routine consultations**

For MDs, the most reported barriers concerned 'lack of time' and 'communication difficulties with non-narrative Dutch speaking patients' (both 66.7%). For nurses it concerned 'communication difficulties with non-narrative Dutch speaking patients' (41.2%) and 'lack of training' (39.4%), for SNs/PAs and sexologists 'patient is too ill to discuss sexual health' (50.0% and 33.3% respectively). Possible barriers which could retain healthcare professionals from discussing treatment-related SD in men treated for PCa are described in Table 3.

**Table 3.** Barriers of health care professionals to discuss sexual health with men experiencing treatment-related sexual dysfunction.

	Disagree n (%)	Neither agree nor disagree n (%)	Agree n (%)
Communication difficulties with non-narrative Dutch speaking patients	23 (41.8)	12 (21.8)	20 (36.4)
Patient is too ill to discuss sexual health	25 (45.5)	12 (21.8)	18 (32.7)
Lack of training	23 (42.6)	16 (29.8)	15 (27.8)
Lack of time	33 (61.1)	6 (11.1)	15 (27.8)
Reasons related to culture and/or religion	36 (66.7)	8 (14.8)	10 (18.5)
Lack of knowledge	32 (58.2)	14 (25.5)	9 (16.4)
Presence of a third party	34 (61.8)	15 (27.3)	6 (10.9)
Survival is main priority for the patient	37 (67.3)	12 (21.8)	6 (10.9)
No complaint or motive for asking	43 (78.2)	7 (12.7)	5 (9.1)
Patient is not ready to discuss sexual health	33 (60.0)	17 (30.9)	5 (9.1)
No possibility for referral	49 (89.1)	2 (3.6)	4 (7.3)
Patient does not initiate the subject of sexual health	47 (85.5)	5 (9.1)	3 (5.5)
Afraid to cause distress or discontent	48 (87.3)	5 (9.1)	2 (3.6)
Embarrassment	51 (92.7)	2 (3.6)	2 (3.6)
Discomfort	47 (85.5)	6 (10.9)	2 (3.6)
No DBC* for treating SD	40 (75.5)	11 (20.8)	2 (3.8)
Not my job	49 (90.7)	4 (7.4)	1 (1.9)
Advanced age of the patient	49 (89.1)	5 (9.1)	1 (1.8)
Sex is a private matter	50 (90.9)	5 (9.1)	0 (0)
Worries about being offensive	51 (92.7)	4 (7.3)	0 (0)
Age difference between yourself and the patient	53 (96.4)	2 (3.6)	0 (0)
Patient is of different gender	55 (100)	0 (0)	0 (0)

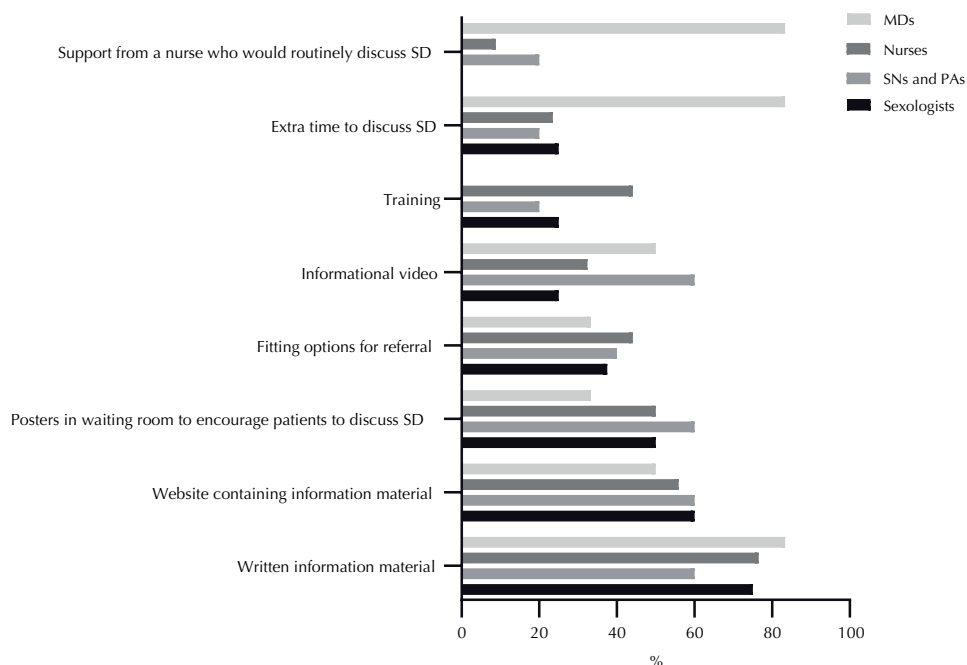
Barriers are sorted in a descending order based on level of agreement.

n may differ due to question routing or participants whom abstained from responding to the question.

\* DBC (Diagnosis Treatment Combination): Dutch hospitals are reimbursed based on fixed prices for a combination of diagnosis and treatment.

At last, the participants were asked which tools would aid to address SD in men treated for PCa. The majority stated written information materials (75.5%) and a website containing adequate information (56.6%) could be valuable resources. MDs reported 'extra time' (83.3%) and 'support from a nurse who would routinely discuss SD' (83.3%) significantly more often than the other healthcare professionals (respectively  $p < 0.05$  and  $p < 0.01$ ). Though mentioned more often by nurses, additional training was not considered a primary tool. Further results are presented in Figure 2.

**Figure 2.** Tools which could aid in addressing sexual dysfunction (SD).



Tools are ordered based on the analysis of all participants with the most frequently mentioned tools at the bottom.

## Discussion

This study was the first to investigate the possible changes in sexual health care as a result of a symposium regarding PCa-related SD among healthcare professionals. In fact, minimal evidence is available on the effects of symposia on any subject among healthcare professionals. Zaïd et. al evaluated the effect of a conference on the practice patterns of dermatologists who treat immunocompetent patients with mucocutaneous herpes simplex infection (83). Significant increase in knowledge of disease, prevention strategies and treatment was reported after attending consensus conference. Resembling results were found by Bafounta et. al, where the effects of a consensus conference aimed at dermatologists and oncologists were studied regarding the follow-up of patients surgically treated for stage I melanoma (84). The number of patients followed by dermatologists increased and detection of progression of disease or detection of melanoma in relatives enhanced. In our study, nurses, SNs/PAs were the only group of healthcare professionals whom stated to feel more competent as a consequence of the symposium. Additionally, when participants had previously complemented their

education with additional training on sexual health, this solely led to more knowledge about SD and not about treatment of SD. Feasibly, this finding may demonstrate a need for education targeting a more narrow group or subject. Considering this specific situation, education should target the medical part of PCa-related SD whereas another type of additional training could focus more on the psychological aspect of PCa-related SD. Moreover, educational interventions could be further refined among healthcare professionals based on the role they have within the sexual health care system.

Furthermore, this study showed that healthcare professionals believe there is a lack of training during their education as regard to SF after PCa treatment. The majority of Dutch urology residents have never received training or education as to addressing sexual health and more than half of the residents do not feel competent to treat men with SD after PCa treatment (33). Besides, most MDs reported 'extra time' and 'support from a nurse who would routinely discuss SD' as most valuable resources. Within the curriculum of Dutch nurse education, knowledge and skills are described using the CanMEDS framework; an educational framework that describes the abilities required to effectively meet health care needs of patients (82, 85). According to the curriculum, a nurse is considered competent to discuss 'Sexuality and Reproduction'. Questions within this category, comprise subjects about satisfaction, alterations and/or problems within sexual relationships. However, nurses indicated to feel the least competent and 'lack of training' was mentioned as one of the main barriers; which does not come as a surprise considering the fact that Dutch nurses are neither trained nor educated to address SD in routine consultations (66, 86). So apparently, nurses are deemed to discuss sexual health problems with patients, yet further education and training is needed.

This study showed that healthcare professionals discussed SD more often after the symposium. Hence, increase of awareness of the consequences of PCa treatment on sexual health was achieved through the symposium. When looking at knowledge, competence and rate of referral, the outcome of additional education and training remains unclear. Research reveals that slightly strenuous interventions, such as train-the-trainer programmes, may cause a positive effect on general practice regarding SD (87). Whilst less intensive programmes, such as an informational e-mail based course, do not seem to cause any significant alterations in general practice (88). Concerning evident lack of education is expressed among healthcare professionals and is encountered as one of the main barriers to discuss SD, it could be hypothesized that improving education standards and additional sexual health training in curricula could pose as a solution (80, 89). A review with the objective to evaluate the effects of continuing medical education on practice performance among healthcare

professionals concluded that data were too scarce to derive conclusions about nature or type of educational technique. Nevertheless, in line with the principles of the adult learning theory, single live media, multiple media and multiple education techniques seem to cause a positive effect on practice performance (90). Thus, future research is necessary to determine what type of educational technique is considered suitable and possibly more effective to enhance knowledge together with competence levels and consequently to alter general practice in order to provide adequate sexual health care when needed.

Still, enhancing education standards and training is one of the many aspects in need of improvement. Furthermore, proper management of current organization in outpatient clinics becomes of great importance when providing adequate sexual health care. Not only are referral pathways to be well regulated; responsibility as to whom should discuss sexual health matters must also be standardized within an outpatient clinic. In this study, nurses and SNs/PAs indicated to dispose of sufficient possibilities to offer sexual health counseling, mostly due to enough time. It is essential for patients to have a main point of contact and to know whom to go to in case further support is needed. Multidisciplinary care in oncological patients has increased over the past years with quality of life as main focus (91). Hence, a case manager could pose as a suitable solution as well. Although the effectiveness of case management in PCa as to treatment-related SD has not been investigated yet, a case manager could assume a coordinating role. Consequently, further research is needed to investigate if case management could play an important part within the sexual health care system to address PCa-related SD.

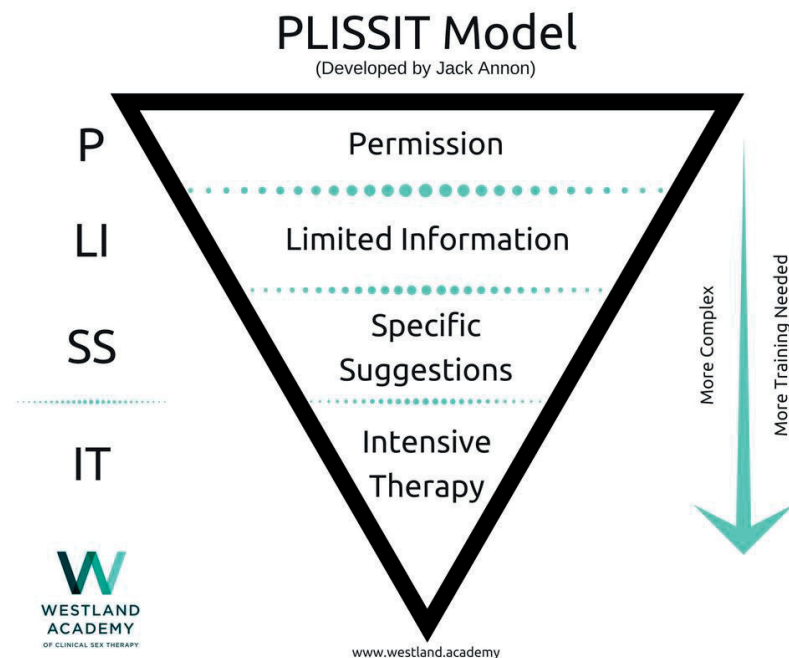
The majority of the participants stated to not have altered general practice due to the fact it already met quality standards. Few participants reported to refer PCa patients to a specialized healthcare professional or a sexologist and this did not significantly change after the symposium. The low rate of referral may possibly lie in the lack of insurance coverage for specialized sexual health care in the Netherlands (92). This matter was well reflected within our study group, since almost all sexologists indicated to hardly ever receive referrals of men experiencing treatment-related SD.

According to the results of this study, tools which could aid healthcare professionals to address SD in routine consultations include written information materials or a website containing adequate information. However, previous research has shown that treatment-related SD for PCa is not routinely addressed in Dutch written information materials (93). When it comes to websites with suitable content, a study by Neese et al. showed that seventy-two percent of the participants stated to search for information themselves; of whom only nine percent stated to have found useful sources (73). Hence,

improving obtainable information for patients, whether it concerns written information materials or adequate information on websites, may hold part of the key to solving this problem.

Another element which may need improvement in sexual health care for men experiencing SD after PCa treatment, is communication about intimacy and sexuality after cancer. Hordern performed a review on the most frequently used communication models between health professionals and patients, amongst others; the PLISSIT model (94). The PLISSIT model is generally represented as an inverted triangle which implies: the deeper the level, the more knowledge, training and skill is required from the concerning health professional, see Figure 3 (95, 96). The first two levels, P and LI, suggest that health professionals can give the patient Permission to discuss the subject and if required, provide Limited Information and inquire if further advice is needed. On that account, Specific Suggestions can be given. In case the health professional feels that the patient is in need of further support, referral can take place for Intensive Therapy. It is important to realize that not all health professionals have the ability to counsel patients in sexual health and so the PLISSIT model is a suitable method to approach men with treatment-related SD.

Figure 3.





The pioneer aspect of this study is one of its key strengths; no research has been performed yet on the influence of a symposium on knowledge, competence and general practice concerning treatment-related SD. Furthermore, this study was performed prospectively by first inventorying knowledge, competence and general practice at the time of the symposium and six months later in order to evaluate changes throughout repeated measures.

Still, there are a few notable limitations that should be further defined. It was a study with a small sample size. As all participants voluntarily attended the symposium focused on sexuality and intimacy, a selection bias is almost certain to be present. Consequently, this may have caused an over-estimation of current sexual health care. A non-validated questionnaire was used, as no validated instrument incorporated specific study aims; although questions were based on questionnaires used in previous research similar to this study, which were evaluated by a test-panel (66, 79, 86). Questions on knowledge, competence and general practice were based on self-assessment, which could have led to socially desirable answers. Despite an average response rate was established, this may concern an underestimation. Absolute distribution could not be assured; however, absolute dissemination was pursued by handing out the questionnaires at the only exit door of the location where the symposium was held. Additionally, thorough evaluation of refusal to participate could not be achieved as not all non-respondents handed in their survey containing reason for non-participation.

## **Conclusion**

This study shows that a symposium that consisted of lectures, casuistry and two workshops aimed at healthcare professionals in the uro-oncological field, had no significant influence on knowledge, competence and rate of referral in men with SD after PCa treatment. Most agreed upon barriers as to discussing SD concerned communication difficulties with non-narrative Dutch speaking patients, patient being too ill, lack of training and lack of time.

## **Relevance to clinical practice**

Despite the fact this symposium had no influence on knowledge, competence or general practice, SD was more frequently discussed after the symposium; so increase of awareness of the consequences of PCa treatment on sexual health was achieved. Through this awareness, healthcare professionals may seek for approachable methods to engage conversation concerning sexuality after oncological treatment. Written information materials and a website containing adequate information were indicated as valuable resources to address SD in routine consultations.

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