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TESIS DOCTORAL

SATISFACCIÓN SEXUAL: ANÁLISIS DE FACTORES ASOCIADOS E IMPLICACIONES CLÍNICAS

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Granada a 1 de julio de 2015

Fdo. Dr. Juan Carlos Sierra Freire Fdo. Dr. Pablo Santos Iglesias

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Esta Tesis Doctoral se ha realizado según las Normas Reguladoras de Enseñanzas Oficiales de Doctorado y del Título de Doctor por la Universidad de Granada aprobada por el Consejo de Gobierno el 2 de Mayo de 2012 (artículo nº 18) referida a la modalidad de *Tesis Doctoral compuesta por el reagrupamiento de trabajos de investigación publicados por el doctorando*.

La presente investigación ha sido realizada en el marco del Proyecto de Investigación titulado “Estudio de la satisfacción sexual a partir de características sociodemográficas y de salud: un modelo explicativo” concedido por el Ministerio de Ciencia e Innovación al Dr. Juan Carlos Sierra Freire (referencia PSI2010-15719).

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ÍNDICE

RESUMEN

Resumen

La satisfacción sexual es un factor clave de la salud sexual y por tanto del bienestar general de las personas. A pesar de su importancia, en España apenas existen investigaciones centradas en el estudio de la satisfacción sexual y en el análisis de los factores asociados. Además, los escasos estudios arrojan resultados contradictorios debido a la ausencia de instrumentos de evaluación adecuados y a la falta de una conceptualización teórica sólida. Con el propósito de superar las limitaciones relacionadas con la evaluación e investigación y con la finalidad de ampliar el conocimiento sobre la satisfacción sexual se ha llevado a cabo la presente Tesis Doctoral.

Los principales objetivos de la Tesis Doctoral fueron los siguientes: (1) revisar las investigaciones previas centradas en el estudio de la satisfacción sexual; (2) adaptar y validar a población española el *Interpersonal Exchange Model of Sexual Satisfaction Questionnaire* (IEMSSQ; Lawrance, Byers y Cohen, 2011); (3) examinar los niveles de satisfacción sexual en una muestra española y analizar la relación de determinadas variables sociodemográficas (género, edad, orientación sexual y nivel educativo), de salud (física y psicológica) y derivadas de la relación de pareja (satisfacción con la relación, tipo de relación, número de parejas sexuales y duración de la relación) con la satisfacción sexual; (4) analizar la validez del Modelo de Intercambio Interpersonal de Satisfacción Sexual (*Interpersonal Exchange Model of Sexual Satisfaction*, IEMSS; Lawrance y Byers, 1992, 1995) en parejas heterosexuales españolas; y (5) poner a prueba un modelo predictivo de la satisfacción sexual basado en la Teoría Ecológica del desarrollo humano (Bronfenbrenner, 1994) con el fin de conocer las variables predictoras de la satisfacción sexual en varones y mujeres.

Para el primer objetivo se realizó una revisión sistemática de los estudios de investigación previos en los que la satisfacción sexual fue la variable dependiente. La búsqueda bibliográfica se llevó a cabo empleando plataformas de búsqueda (EBSCOhost y PRoQuest), ya que incorporan numerosas bases de datos de diferentes áreas temáticas, y en las principales bases de datos electrónicas de Psicología, Medicina y Ciencias Sociales (PsycINFO, PubMed, Scopus y Web of Science). Se seleccionaron 197 estudios y de cada uno de ellos se extrajo la siguiente información: autor/es y año

de publicación, metodología del estudio, muestras empleadas, instrumentos utilizados para evaluar la satisfacción sexual y principales resultados identificando las variables relacionadas con la satisfacción sexual. Las variables asociadas con la satisfacción sexual fueron organizadas de acuerdo a los niveles propuestos por la Teoría Ecológica del desarrollo humano (Bronfenbrenner, 1994): microsistema (características individuales), mesosistema (variables interpersonales), exosistema (variables sociales) y macrosistema (variables culturales e institucionales). Los resultados muestran la importancia de la satisfacción sexual, pues se asocia con diversos indicadores de la salud sexual y del bienestar general. Además, esta revisión permitió conocer algunas limitaciones de las investigaciones previas como la escasez de estudios realizados en España, problemas en la evaluación de la satisfacción sexual y la escasez de estudios basados en teorías consolidadas de la satisfacción sexual. Por ello, esta revisión sistemática sirvió como punto de partida para establecer los objetivos restantes de los estudios que componen la presente Tesis Doctoral.

Para el segundo objetivo se llevó a cabo un estudio para adaptar y validar el *Interpersonal Exchange Model of Sexual Satisfaction Questionnaire* (IEMSSQ; Lawrance et al., 2011). El IEMSSQ es uno de los pocos instrumentos de evaluación desarrollado a partir de un modelo teórico validado, el Modelo de Intercambio Interpersonal de Satisfacción Sexual (*Interpersonal Exchange Model of Sexual Satisfaction*, IEMSS; Lawrance y Byers, 1992, 1995). Este cuestionario está compuesto por una medida que evalúa la satisfacción sexual general (*Global Measure of Sexual Satisfaction*, GMSEX), otra que evalúa uno de los componentes que forma parte del modelo teórico para explicar la satisfacción sexual, la satisfacción con la relación de pareja (*Global Measure of Relationship Satisfaction*, GMREL), y por un cuestionario (*Exchange Questionnaire*, EQ) que evalúa los otros componentes en los que se basa el IEMSS para explicar la satisfacción sexual: balance de beneficios y costes sexuales (*sexual Rewards-Costs*; REW-CST), nivel comparativo de beneficios y costes sexuales (*Comparison Level of sexual rewards and costs*; CL_{REW}-CL_{CST}) e igualdad de beneficios e igualdad de costes sexuales (*Equality of sexual rewards, Equality of sexual costs*; EQ_{REW}, EQ_{CST}). Además, incluye un listado formado por 58 ítems para evaluar intercambios sexuales que pueden ser identificados como beneficios y/o costes de las relaciones sexuales. Con el objetivo de examinar las propiedades psicométricas del IEMSSQ se evaluó una muestra, seleccionada mediante un procedimiento incidental, de

520 varones y 701 mujeres, con edades comprendidas entre 18 y 67 años. Todos los participantes mantenían una relación de pareja heterosexual de al menos seis meses de duración con actividad sexual. Los participantes completaron un cuestionario sociodemográfico, la traducción española del *Interpersonal Exchange Model of Sexual Satisfaction Questionnaire* y la adaptación española de los siguientes instrumentos: *Index of Sexual Satisfaction, Dyadic Adjustment Scale y Massachusetts General Hospital Sexual Functioning Questionnaire*. Una vez traducido y adaptado lingüísticamente el IEMSSQ, se examinaron sus propiedades psicométricas (i.e., fiabilidad de consistencia interna, fiabilidad test-retest, validez de constructo y validez concurrente). Tras el análisis factorial confirmatorio se comprueba que las medidas GMSEX y GMREL evalúan dos constructos diferentes pero relacionados. Además, ambas medidas mostraron buenos índices de fiabilidad de consistencia interna ($\alpha >$ 0,90). La fiabilidad test-retest a las cuatro y seis semanas también fue buena para todas las medidas del cuestionario, excepto para los componentes de igualdad que fue moderada. Asimismo, las distintas medidas del IEMSSQ también mostraron validez concurrente, pues sus puntuaciones correlacionaron con otras medidas de satisfacción sexual, ajuste diádico y funcionamiento sexual. En definitiva, este estudio ofrece un instrumento de evaluación fiable y válido para evaluar la satisfacción sexual en población española.

Para el tercer objetivo se realizó un estudio con la finalidad de examinar los niveles de satisfacción sexual y analizar la relación de variables sociodemográficas (género, edad, orientación sexual y nivel educativo), indicadores de salud (física y psicológica) y variables interpersonales (satisfacción con la relación, tipo de relación, número de parejas sexuales y duración de la relación) con la satisfacción sexual. Mediante un muestreo por cuotas se seleccionaron 2.024 participantes (50,1% varones y 49,9% mujeres) heterosexuales (92,7%) y homosexuales (7,3%), con edades entre los 18 y 80 años. Todos mantenían una relación de pareja de al menos seis meses de duración con actividad sexual y tenían nacionalidad española. Los participantes completaron un cuestionario sociodemográfico y las versiones españolas de los siguientes instrumentos: *Global Measure of Sexual Satisfaction*, *Global Measure of Relationship Satisfaction*, *Short Form-36 Health Survey* y *Symptom Assessment-45 Questionnaire*. Tras los resultados obtenidos se comprobó la ausencia de diferencias estadísticamente significativas en los niveles de satisfacción sexual en función del género y de la orientación sexual. De forma general, la satisfacción sexual correlacionó

de forma negativa con la edad, con el nivel educativo, con síntomas psicopatológicos y con la duración de la relación; lo hizo de forma positiva con el estado de salud física y con la satisfacción con la relación. Por último, mediante un modelo de regresión, se examinaron las variables predictoras. En la muestra de participantes heterosexuales, el 55% de la varianza de la satisfacción sexual fue predicha por la vitalidad, depresión, satisfacción con la relación, duración de la relación y tipo de relación. En la muestra de sujetos homosexuales, el 44% de la varianza de la satisfacción sexual fue predicha por el dolor corporal y por la satisfacción con la relación. Este estudio muestra que variables sociodemográficas y de salud, así como las derivadas de la relación de pareja, se asocian con la satisfacción sexual. Por ello, se plantea la necesidad de futuros estudios en los que la satisfacción sexual sea analizada empleando modelos teóricos específicos para su estudio y comprensión.

Para el cuarto objetivo se llevó a cabo un estudio con el propósito de analizar la validez del Modelo de Intercambio Interpersonal de Satisfacción Sexual (*Interpersonal Exchange Model of Sexual Satisfaction*, IEMSS; Lawrance y Byers, 1992, 1995). Este modelo teórico explica la satisfacción sexual a través de cuatro componentes: nivel de beneficios y costes sexuales, nivel comparativo de beneficios y costes sexuales, igualdad de beneficios e igualdad de costes sexuales y la satisfacción con la relación. La muestra fue recogida mediante un procedimiento incidental y estuvo compuesta por 197 parejas heterosexuales, con edades entre los 18 y 64 años. Todas las parejas mantenían una relación de al menos seis meses de duración con actividad sexual. Cada uno de los miembros de la pareja completó de forma independiente un cuestionario sociodemográfico y la adaptación española del *Interpersonal Exchange Model of Sexual Satisfaction Questionnaire*. Tras los resultados se comprobó que todos los componentes del modelo se relacionaban con la satisfacción sexual, excepto la igualdad de beneficios en el caso de los varones. La validez del modelo fue examinada mediante modelos de ecuaciones estructurales, teniendo en cuenta el Modelo de Interdependencia Actor-Pareja (*Actor-Partner Interdependence Model*, APIM). En el caso de los varones, la satisfacción sexual fue predicha por la satisfacción con la relación, el balance de beneficios y costes sexuales, y por el nivel comparativo de beneficios y costes sexuales. En el caso de las mujeres, la satisfacción sexual fue predicha por la satisfacción con la relación, el balance de beneficios y costes sexuales, el nivel comparativo de beneficios y costes sexuales, y la igualdad de costes sexuales. Además, se encontró un efecto pareja.

La satisfacción sexual de las mujeres disminuía cuando los hombres informaban más beneficios que costes sexuales. Estos componentes explicaron el 74% de la varianza de la satisfacción sexual. Tras los resultados obtenidos se comprueba la validez del modelo examinado para la comprensión de la satisfacción sexual en parejas heterosexuales españolas, así como la importancia de evaluar a los dos miembros de la pareja cuando se estudia la satisfacción sexual en personas que mantienen una relación de pareja.

Para el quinto objetivo se realizó un estudio con la finalidad de examinar un modelo predictivo para explicar la satisfacción sexual, tomando como marco de referencia la Teoría Ecológica del desarrollo humano (Bronfenbrenner, 1994). Se analizó el poder predictivo de variables pertenecientes al microsistema (depresión y actitudes sexuales), mesosistema (satisfacción con la relación, funcionamiento sexual y asertividad sexual), exosistema (apoyo social, paternidad y nivel socioeconómico) y macrosistema (ideología política, religión profesada y práctica religiosa) sobre la satisfacción sexual. La muestra se seleccionó mediante un muestro incidental. Participaron 723 varones y 851 mujeres con edades comprendidas entre 18 y 80 años. Todos mantenían una relación de pareja heterosexual de al menos seis meses de duración con actividad sexual y tenían nacionalidad española. Los participantes completaron un cuestionario sociodemográfico y las versiones españolas de los siguientes instrumentos de evaluación: *Global Measure of Sexual Satisfaction*, *Center for Epidemiologic Studies-Depression,* versión breve del *Sexual Opinion Survey, Global Measure of Relationship Satisfaction, Massachusetts General Hospital Sexual Functioning Questionnaire, Sexual Assertiveness Scale* y Escala de Apoyo Social. La satisfacción sexual de los varones fue predicha de manera directa por la satisfacción con la relación y el funcionamiento sexual. Asimismo, la ideología política, la práctica religiosa, el apoyo social, el nivel socioeconómico, la asertividad sexual de inicio y las actitudes sexuales se asociaron de manera indirecta con la satisfacción sexual. El modelo final explicó el 56,7% de la varianza de la satisfacción sexual en varones. La satisfacción sexual de las mujeres fue predicha de manera directa por la satisfacción con la relación, el funcionamiento sexual, la asertividad sexual y las actitudes sexuales. La ideología política, la práctica religiosa y el apoyo social se asociaron de manera indirecta con la satisfacción sexual. El modelo final explicó el 55,4% de la varianza de la satisfacción sexual en mujeres. Estos resultados son relevantes tanto para la investigación como para la práctica clínica, pues muestran que la satisfacción sexual se asocia con variables individuales, relacionales, sociales y culturales.

SUMMARY

Summary

Sexual satisfaction is a key factor of sexual health and, therefore, the general wellbeing of the people. Despite its importance, in Spain there is little research focused on the study of sexual satisfaction and on the analysis of associated factors. Moreover, the few studies evidence contradictory results due to the lack of appropriate assessment tools and the lack of a solid theoretical conceptualization. In order to overcome the limitations related to the evaluation and research, and with the purpose of increasing the knowledge of sexual satisfaction we conducted the present Doctoral Dissertation.

The main goals of the Doctoral Dissertation were the following: (1) to review previous research focused on the study of sexual satisfaction; (2) to adapt and validate in Spanish population the Interpersonal Exchange Model of Sexual Satisfaction Questionnaire (IEMSSQ; Lawrance, Byers, & Cohen, 2011); (3) to examine the levels of sexual satisfaction in a Spanish sample and to analyze the relationship of determined socio-demographic (gender, age, sexual orientation and educational level) and health variables (physical and psychological) and those derived from the relationship (relationship satisfaction, kind of relationship, number of sexual partners and length of the relationship) with sexual satisfaction; (4) to analyze the validity of the Interpersonal Exchange Model of Sexual Satisfaction (IEMSS; Lawrance & Byers, 1992, 1995) in heterosexual Spanish couples; and (5) to test a predictive model of sexual satisfaction based on the Ecological Theory of human development (Bronfenbrenner, 1994) in order to know the predictors of sexual satisfaction in men and women.

For the first goal we performed a systematic review of previous research studies in which sexual satisfaction was the dependent variable. The literature search was conducted employing search platforms (EBSCOhost and ProQuest), because they incorporate numerous databases of different thematic areas, and main electronic databases of Psychology, Medicine and Social Sciences. We selected 197 articles and from each of them the following information was extracted: autor(s) and year of publication, study methodology, samples used, assessment instrument used to evaluate sexual satisfaction and key results identifying variables related to sexual satisfaction. The variables associated with sexual satisfaction were organized according to the levels proposed by the Ecological Theory of human development (Bronfenbrenner, 1994): microsystem (individual characteristics), mesosystem (interpersonal variables),

exosystem (social variables) and macrosystem (cultural and institutional variables). The results show the importance of sexual satisfaction, as it is associated with various indicators of sexual health and general wellbeing. In addition, this review yielded information on some limitations of previous research such as the shortage of studies in Spain, problems in the evaluation of sexual satisfaction and the lack of studies based on consolidated sexual satisfaction theories. Therefore, this systematic review served as a starting point for establishing the remaining objectives of the studies that comprise this Doctoral Dissertation.

In order to fulfill the second goal we conducted a study to adapt and validate the Interpersonal Exchange Model of Sexual Satisfaction Questionnaire (IEMSSQ; Lawrance et al., 2011). The IEMSSQ is one of the few assessment instruments developed based on a validated theoretical model, the Interpersonal Exchange Model of Sexual Satisfaction (IEMSS; Lawrance & Byers, 1992, 1995). This questionnaire is composed of a measure that assesses the overall sexual satisfaction (Global Measure of Sexual Satisfaction, GMSEX), another that assesses a component which is part of the theoretical model to explain the sexual satisfaction, relationship satisfaction (Global Measure of Relationship Satisfaction, GMREL), and a questionnaire (Questionnaire Exchange, EQ) which assesses the other components on which IEMSS relies to explain the sexual satisfaction: balance of sexual rewards and costs (REW-CST), comparison level of sexual rewards and costs (CL_{REW}-CL_{CST}), and equality of sexual rewards and equality of sexual costs (EQ_{REW}, EQ_{CST}). It also includes a checklist consisting of 58 items to assess sexual exchanges that can be identified as sexual rewards and/or sexual costs. In order to examine the psychometric properties of IEMSSQ we evaluated a sample, recruited using a convenience sampling procedure, of 520 men and 701 women, aged ranging from 18 to 67 years old. All participants maintained a heterosexual relationship of at least six months with sexual activity. Participants completed a background questionnaire, the Spanish translation of the Interpersonal Exchange Model of Sexual Satisfaction Questionnaire and the Spanish adaptation of the following instruments: Index of Sexual Satisfaction, Dyadic Adjustment Scale and Massachusetts General Hospital Sexual Functioning Questionnaire. Once the IEMSSQ was translated and linguistically adapted, we examined its psychometric properties (i.e., internal consistency reliability, test-retest reliability, construct validity and concurrent validity). As from the confirmatory factor analysis, it is found that the GMSEX and GMREL measures evaluate two different but related constructs. In addition, both measures

showed good indexes of internal consistency reliability (α > .90). The test-retest reliability taken four to six weeks after was also good for all measures of the questionnaire, except for the components of equality that was moderate. Besides, the different measures of IEMSSQ also showed concurrent validity, because their scores correlated with other measures of sexual satisfaction, dyadic adjustment, and sexual functioning. In short, this study provides a reliable and valid assessment instrument for assessing sexual satisfaction in Spanish population.

For the third objective we performed a study in order to examine the levels of sexual satisfaction and analyze the relationship between socio-demographic variables (gender, age, sexual orientation and educational level), health indicators (physical and psychological), and interpersonal variables (relationship satisfaction, type of relationship, number of sexual partners and length of the relationship) with sexual satisfaction. Through a quota sampling 2,024 participants were selected (50.1% men and 49.9% women) heterosexuals (92.7%) and homosexuals (7.3%), aged from 18 to 80 years old. All of them maintained a relationship of at least six months with sexual activity and had Spanish citizenship. Participants completed a background questionnaire and the Spanish versions of the following instruments: Global Measure of Sexual Satisfaction, Global Measure of Relationship Satisfaction, Short Form-36 Health Survey and Symptom Assessment-45 Questionnaire. The results obtained showed the absence of statistically significant differences in levels of sexual satisfaction by gender and sexual orientation. In general, sexual satisfaction correlated negatively with age, educational level, psychopathological symptoms and duration of the relationship; it was correlated positively with the physical health status and relationship satisfaction. Finally, using a regression model, we examined the predictor variables. In the sample of heterosexual participants, 55% of the variance of sexual satisfaction was predicted by the vitality, depression, relationship satisfaction, duration of the relationship and type of relationship. In the sample of homosexual subjects, 44% of the variance of sexual satisfaction was predicted by bodily pain and relationship satisfaction. This study shows that socio-demographic and health variables, as well as those arising from the relationship, are associated with sexual satisfaction. Therefore, there is a need for future studies in which sexual satisfaction is analyzed using specific theoretical models for the study and understanding.

For the fourth goal we carried out a study in order to analyze the validity of Interpersonal Exchange Model of Sexual Satisfaction (IEMSS; Lawrance & Byers,

1992, 1995). This theoretical model explains sexual satisfaction through four components: balance of sexual rewards and costs, comparison level of sexual rewards and costs, equality of sexual rewards and equality of sexual costs, and relationship satisfaction. The sample was gathered using an incidental procedure and was composed of 197 heterosexual couples, aged between 18 and 64 years old. All couples had a relationship of at least six months with sexual activity. Each of the members of the couple independently completed a background questionnaire and the Spanish adaptation of the Interpersonal Exchange Model of Sexual Satisfaction Questionnaire. The results obtained showed that all the IEMSS components were related to sexual satisfaction, except for the equality of sexual rewards in men. The validity of the model was examined by structural equation modeling, considering the Actor-Partner Interdependence Model (APIM). In men, sexual satisfaction was predicted by relationship satisfaction, the balance of sexual rewards and costs, and the comparison level of sexual rewards and costs. In women, sexual satisfaction was predicted by relationship satisfaction, the balance of sexual rewards and costs, the comparison level of sexual rewards and costs, and the equality of sexual costs. In addition, a partner effect was found. The sexual satisfaction of women decreased when men reported more sexual rewards than costs. These components accounted for 74% of the variance of sexual satisfaction. The results showed the validity of the examined model for understanding sexual satisfaction in Spanish heterosexual couples, as well as the importance of evaluating both members of the couple when the sexual satisfaction is examined in people who maintain an intimate relationship.

For the fifth goal we performed a study in order to examine a predictive model to explain the sexual satisfaction, taking as reference the Ecological Theory of human development (Bronfenbrenner, 1994). We analyzed the predictive power of variables belonging to the microsystem (depression and sexual attitudes), mesosystem (relationship satisfaction, sexual function and sexual assertiveness), exosystem (social support, parenthood and socioeconomic status) and macrosystem (political ideology, professed religion and religious practice) on sexual satisfaction. The sample was selected by incidental sampling. Participated 723 men and 851 women aged between 18 and 80 years old. They all maintained a heterosexual relationship of at least six months with sexual activity and had Spanish citizenship. Participants completed a background questionnaire and the Spanish versions of the following assessment instruments: Global Measure of Sexual Satisfaction, Center for Epidemiologic Studies-Depression, short

version of the Sexual Opinion Survey, Global Measure of Relationship Satisfaction, Massachusetts General Hospital Sexual Functioning Questionnaire, Sexual Assertiveness Scale and Social Support Scale *(Escala de Apoyo Social)*. Men's sexual satisfaction was directly predicted by relationship satisfaction and sexual function. Furthermore, political ideology, religious practice, social support, socioeconomic status, initiation sexual assertiveness, and sexual attitudes were indirectly associated with sexual satisfaction. The final model explained 56.7% of the variance of sexual satisfaction in men. Women's sexual satisfaction was directly predicted by relationship satisfaction, sexual function, sexual assertiveness, and sexual attitudes. Political ideology, religious practice, and social support were indirectly associated with sexual satisfaction. The final model explained 55.4% of the variance of sexual satisfaction in women. These results are relevant for both research and clinical practice, they show that sexual satisfaction is associated with individual, relational, social and cultural variables.

INTRODUCCIÓN

Introducción

1. Sexualidad, salud sexual y derechos sexuales

La satisfacción sexual es un componente clave de la sexualidad humana, pues constituye un factor fundamental de la salud sexual y es reconocida como un derecho sexual (World Health Organization, WHO, 2010). Por ello, antes de centrarnos en ella, es importante hacer una breve referencia a la sexualidad, a la salud sexual y a los derechos sexuales. Una de las definiciones más completas de la sexualidad humana es la que propuso en el año 2002 la Organización Mundial de la Salud en colaboración con la Asociación Mundial para la Salud Sexual (World Association for Sexual Health, WAS). La sexualidad fue definida como "un aspecto central del ser humano a lo largo de la vida, que abarca el sexo, la identidad de género y rol, la orientación sexual, el erotismo, el placer, la intimidad y la reproducción. Se experimenta y se expresa en pensamientos, fantasías, deseos, creencias, actitudes, valores, comportamientos, prácticas, roles y relaciones. La sexualidad incluye todas estas dimensiones, sin embargo no todas siempre se experimentan o se expresan. Por último, la sexualidad depende de la interacción de factores biológicos, psicológicos, sociales, económicos, políticos, culturales, éticos, legales, históricos, religiosos y espirituales" (WHO, 2006, p. 5; WHO, 2010, p. 10).

Otro concepto esencial asociado a la sexualidad humana es el de salud sexual, que ha sido definida como "un estado de bienestar físico, emocional, mental y social relacionado con la sexualidad; la salud sexual no es solo la ausencia de enfermedad, disfunción o dolencia. La salud sexual requiere un enfoque positivo y respetuoso con la sexualidad y las relaciones sexuales y la posibilidad de experiencias sexuales placenteras y seguras, libres de coerción, discriminación y violencia. Para que la salud sexual se logre y se mantenga, los derechos sexuales deben ser respetados, protegidos y cumplidos" (WHO, 2006, p. 5; WHO, 2010, p. 10).

Los derechos sexuales son derechos humanos universales basados en la libertad, dignidad e igualdad inherentes a todos los seres humanos (WHO, 2010). La primera Declaración de los Derechos Sexuales fue propuesta en el XIII Congreso Mundial de Sexología celebrado en 1997, revisada y aprobada en el año 1999, y reafirmada

posteriormente en 2008 por la WAS. En su reciente revisión, aprobada por la WAS en 2014, se incluyen los siguientes derechos sexuales: (1) derecho a la igualdad y a la no discriminación; (2) derecho a la vida, libertad y seguridad de la persona; (3) derecho a la autonomía e integridad del cuerpo; (4) derecho a una vida libre de tortura, trato o pena crueles, inhumanos o degradantes; (5) derecho a una vida libre de todas las formas de violencia y de coerción; (6) derecho a la privacidad; (7) derecho al grado máximo alcanzable de salud, incluyendo la salud sexual que comprende experiencias sexuales placenteras, satisfactorias y seguras; (8) derecho a gozar de los adelantos científicos y de los beneficios que de ellos resulten; (9) derecho a la información (10); derecho a la educación y derecho a la educación integral de la sexualidad; (11) derecho a contraer, formar o disolver el matrimonio y otras formas similares de relaciones basadas en la equidad y el pleno y libre consentimiento; (12) derecho a decidir tener hijos, el número y espaciamiento de los mismos, y a tener acceso a la información y los medios para lograrlo; (13) derecho a la libertad de pensamiento, opinión y expresión; (14) derecho a la libre asociación y reunión pacífica; (15) derecho a participar en la vida pública y política, derecho a participar en el desarrollo y la implementación de políticas que determinen el bienestar, incluyendo la sexualidad y salud sexual; y (16) derecho al acceso a la justicia y a la retribución y la indemnización por las violaciones de los derechos sexuales (WAS, 2014). En resumen, la salud sexual va más allá de la ausencia de enfermedades o disfunciones sexuales pues se refiere también a la posibilidad de experiencias sexuales placenteras. Por ello, uno de los derechos sexuales, el séptimo, alude a las experiencias sexuales placenteras y satisfactorias. En este contexto, adquiere especial relevancia la satisfacción sexual.

2. Satisfacción sexual

2.1. Importancia de la satisfacción sexual

La satisfacción sexual además de ser considerada un aspecto clave de la salud sexual, ha sido relacionada con muchos otros aspectos de la vida sexual y emocional de las personas (Parish et al., 2007). Por ejemplo, niveles elevados de satisfacción sexual han sido predictores de un mejor estado de salud físico y psicológico (Davison, Bell,

LaChina, Holden y Davis, 2009; Laumann et al., 2006; Tower y Krasner, 2006) así como del bienestar general y de la calidad de vida (Byers y Rehman, 2014; Robinson y Molzahn, 2007; Stephenson y Meston, 2011; Ventegodt, 1998). Además, la satisfacción sexual predice mayor satisfacción con la relación de pareja (Byers, 2005; Holmberg, Blair y Phillips, 2010; Kisler y Christopher, 2008; Mark, Milhausen y Maitland, 2013) y mayor estabilidad marital (Christopher y Sprecher, 2000; Karney y Bradbury, 1995). Asimismo, la satisfacción sexual se ha relacionado con la comunicación en el ámbito de la pareja (MacNeil y Byers, 2005, 2009; McCarthy y Bodner, 2005; Miller y Byers, 2004; Purnine y Carey, 1997) y la intimidad (Rubin y Campbell, 2012). También ha sido asociada con el funcionamiento sexual y la frecuencia de actividad sexual (Bancroft, Long y McCabe, 2011; Heiman et al., 2011; Smith et al., 2012) y, además, ha sido considerada como el resultado de la respuesta sexual (Basson, 2001; Carrobles y Sanz, 1991; Sierra y Buela-Casal, 2004). Finalmente, aspectos socioculturales como el apoyo social, factores derivados de la vida laboral y la religión también se relacionan con la satisfacción sexual (Henderson, Lehavot y Simoni, 2009; Higgins, Trussell, Moore y Davidson, 2010; Lau, Kim y Tsui, 2005).

2.2. Conceptualización de la satisfacción sexual

Dada la importancia de la satisfacción sexual resultan llamativas las simples, tautológicas y escasas definiciones realizadas sobre este constructo. Por ejemplo, la satisfacción sexual ha sido definida como "el grado en el que uno está satisfecho con su vida sexual" (Pinney, Gerrard y Denney, 1987, p. 234) o como "el grado en el que un individuo está satisfecho o feliz con los aspectos sexuales de su relación" (Sprecher y Cate, 2004, p. 236). Estas definiciones dejan entrever la falta de una conceptualización teórica sólida, debido fundamentalmente a la ausencia de modelos teóricos específicos sobre la satisfacción sexual. Resulta interesante la reciente investigación de Pascoal, Narciso y Pereira (2014) que analizó cualitativamente lo que significa la satisfacción sexual para las personas; los resultados apuntaron que la satisfacción sexual tendría dos componentes: uno personal y otro diádico. El componente personal se refiere a los aspectos agradables, positivos de las relaciones sexuales como la excitación o el placer, y el componente diádico incluye aspectos como la intimidad o el placer mutuo. En esta línea, destaca una definición que tiene en cuenta el contexto interpersonal en el que ocurren las relaciones sexuales y además, fue desarrollada a partir de un modelo teórico,

el Modelo de Intercambio Interpersonal de Satisfacción Sexual (*Interpersonal Exchange Model of Sexual Satisfaction*, IEMSS; Lawrance y Byers, 1992, 1995). Sus autoras, Lawrance y Byers (1995), definieron la satisfacción sexual como "una respuesta afectiva derivada de la propia evaluación subjetiva de los aspectos positivos y negativos asociados a las propias relaciones sexuales" (p. 268). Esta definición será la aceptada y asumida a lo largo de la presente Tesis Doctoral.

2.3. Limitaciones asociadas al estudio de la satisfacción sexual

De forma general, una de las principales limitaciones en el estudio de la satisfacción sexual está referida a la escasez de modelos teóricos que estructuren y guíen la investigación en este campo. Otra importante limitación está relacionada con los instrumentos empleados para la evaluación de este constructo. Además, en España son muy escasas las investigaciones centradas en el estudio de la satisfacción sexual y las existentes también presentan las limitaciones que se acaban de señalar.

2.3.1 Modelos teóricos para analizar la satisfacción sexual

La investigación debe ser guiada por la teoría para que de esta manera se incremente la compresión de los factores que afectan a la sexualidad humana en general, y a la satisfacción sexual en particular (Byers, 1999; Sprecher y Cate, 2004; Stulhofer, Busko y Brouillard, 2010). Sin embargo, apenas existen modelos teóricos desarrollados para explicar la satisfacción sexual. Entre los escasos que se han planteado, destaca el Modelo de Intercambio Interpersonal de Satisfacción Sexual (*Intepersonal Exchange Model of Sexual Satisfaction*, IEMSS; Lawrance y Byers, 1992, 1995), siendo el modelo más investigado (Byers y Rehman, 2014) y que será objeto de estudio en la presente Tesis Doctoral. Otro modelo teórico es el Modelo de Conocimiento e Influencia Sexual (*Sexual Knowledge and Influence Model*, SKIM). Este modelo propone que la voluntad de comunicar y el conocimiento sexual serán predictores de la satisfacción sexual. Sin embargo el SKIM apenas ha sido puesto a prueba y los resultados obtenidos mostraron que solo el conocimiento sexual era predictor de la satisfacción sexual (La France, 2010).

Por otra parte, cabe destacar que algunos estudios se han basado en teorías con el propósito de desarrollar modelos predictivos para analizar los factores asociados a la

satisfacción sexual. Ejemplo de ello son las investigaciones guiadas por la Teoría del Apego (Bowlby, 1969, 1973, 1980; Mikulincer y Shaver, 2003, 2007) en las que se analiza el poder predictivo de los distintos tipos de apego sobre la satisfacción sexual (Butzer y Campbell, 2008). Para explicar la satisfacción sexual en función del género se ha empleado la Teoría de los Esquemas Sexuales (McCormick, 1987, 2010; Simon y Gagnon, 1986, 2003). Finalmente, destaca en la literatura la Teoría Ecológica del desarrollo humano (Bronfenbrenner, 1994), la cual se utilizó para poner a prueba un modelo predictivo de la satisfacción sexual integrando variables individuales, interpersonales y sociales (Henderson et al., 2009).

A continuación, se describe el Modelo de Intercambio Interpersonal de Satisfacción Sexual (IEMSS; Lawrance y Byers, 1995), puesto que ha sido el modelo teórico más investigado, ha demostrado su validez en diferentes países, como se señalará a continuación, y ha sido considerado uno de los más importantes para comprender y explicar la satisfacción sexual desde una perspectiva interpersonal (Peck, Shaffer y Williamson, 2005). En segundo lugar, se describe el modelo ecológico predictivo de la satisfacción sexual (Henderson et al., 2009), ya que resulta muy útil al permitir examinar de manera conjunta las diferentes variables asociadas a la satisfacción sexual, desde la perspectiva que ofrece la Teoría Ecológica (Bronfenbrenner, 1994). Ambos modelos constituirán el soporte teórico de esta Tesis Doctoral.

El IEMSS (Lawrance y Byers, 1992, 1995) fue desarrollado de acuerdo con la Teoría de Intercambio Social (Thibaut y Kelley, 1959). Esta teoría explica el desarrollo, mantenimiento y deterioro de las relaciones en función de los intercambios que se producen dentro de las mismas. Los intercambios son aquellas situaciones, pensamientos y/o comportamientos que se producen entre los miembros de la pareja y que pueden ser considerados como positivos o negativos. Los beneficios son los intercambios considerados positivos, agradables y placenteros, mientras que los costes son los intercambios negativos que pueden producir ansiedad, malestar, dolor, vergüenza o que suponen un esfuerzo mental y/o físico (Thibaut y Kelley, 1959). Desde la perspectiva de intercambio social, cada individuo en una díada participa en un conjunto de interacciones interpersonales con el objetivo de influir en su pareja y obtener los resultados más favorables, maximizando los beneficios y minimizando los costes que obtiene de esas interacciones. Las personas estarán más satisfechas si los

beneficios superan a los costes (Byers y Wang, 2004; Thibaut y Kelley, 1959). Por tanto, la perspectiva de intercambio social resulta interesante para la comprensión de la sexualidad en las relaciones íntimas, ya que tiene en cuenta el contexto interpersonal (Byers y Wang, 2004).

El Modelo de Intercambio Interpersonal de Satisfacción Sexual (IEMSS; Lawrance y Byers, 1992, 1995) propone que la satisfacción sexual será mayor cuando: 1) los beneficios sexuales superen a los costes sexuales (*sexual Rewards-Costs*; REW-CST); 2) el nivel relativo de beneficios sexuales (i.e., la comparación entre el nivel actual de beneficios sexuales y el esperado en la relación) supere al nivel relativo de costes sexuales (i.e., la comparación entre el nivel actual de costes sexuales y el esperado en la relación) (*Comparison Level of sexual rewards and costs*; CL_{REW}-CL_{CST}); 3) la igualdad de beneficios y costes sexuales sea alta (*Equality of sexual rewards, Equality of sexual costs*; EQ_{REW}, EQ_{CST}), es decir, cuando un miembro de la pareja percibe que sus beneficios/costes son similares a los que obtiene su pareja en sus relaciones sexuales; y 4) cuando la satisfacción con la relación sea alta (*Global Measure of Sexual Satisfaction*; GMREL). En definitiva, este modelo de la satisfacción sexual está formado por cuatro componentes que explican, dependiendo de los estudios, entre un 58% y 75% de su varianza (Byers, Demmons y Lawrance, 1998; Byers y MacNeil, 2006; Lawrance y Byers, 1995; Renaud, Byers y Pan, 1997). Asimismo, el IEMSS ha demostrado ser válido independientemente del género, tipo de relación, duración de la relación y paternidad (Byers et al., 1998; Byers y MacNeil, 2006; La France, 2010; Lawrance y Byers, 1995; Peck et al., 2005; Renaud et al., 1997).

Uno de los modelos predictivos de la satisfacción sexual empleado en la literatura, como se ha mencionado anteriormente, es el fundamentado en la Teoría Ecológica del desarrollo humano (Bronfenbrenner, 1994). Esta teoría propone que el desarrollo personal se produce por la interacción entre las propias características individuales y los contextos ambientales en los que interacciona el individuo. Por tanto, esta perspectiva concibe el ambiente ecológico como un conjunto de estructuras seriadas y estructuradas en diferentes niveles: microsistema, mesosistema, exosistema y macrosistema. El nivel más próximo al individuo es el microsistema (variables individuales), seguido por el mesosistema (variables interpersonales). El tercer nivel es

el exosistema (variables sociales), que afecta a los niveles anteriores, mesosistema y microsistema y, por último, el nivel más alejado del individuo es el macrosistema (variables culturales). Estos cuatro niveles son considerados como una serie de estructuras interrelacionadas entre sí, y que finalmente conducen al desarrollo individual (Bronfenbrenner, 1994). Dependiendo del campo de estudio en el que se aplique esta teoría, los cuatro niveles pueden incluir distintas variables, no obstante el microsistema siempre se refiere al entorno más próximo del individuo mientras que el macrosistema alude al entorno más alejado (Bronfenbrenner, 1994). El modelo ecológico supone una herramienta conceptual que permite integrar múltiples factores y examinarlos tanto de forma individual como de manera conjunta con el fin de analizar su relación con el desarrollo personal.

Dado que la satisfacción sexual puede verse afectada por características individuales, relacionales, sociales y culturales resulta interesante el marco que ofrece la Teoría Ecológica para su estudio. En este sentido, Henderson et al. (2009) pusieron a prueba un modelo integrador, basado en la Teoría Ecológica (Bronfenbrenner, 1994), para explicar la satisfacción sexual en mujeres. Este modelo incluyó variables individuales (depresión, abuso sexual infantil y homofobia interiorizada), interpersonales (satisfacción con la relación y funcionamiento sexual) y sociales (apoyo social, paternidad y nivel socioeconómico) como predictoras de la satisfacción sexual. Sus resultados mostraron que tanto las variables individuales (homofobia interiorizada, en lesbianas), como variables relacionales (satisfacción con la relación y funcionamiento sexual) y variables sociales (apoyo social) estaban relacionadas con la satisfacción sexual. Este modelo predijo el 65% y el 54% de la varianza de la satisfacción sexual en mujeres heterosexuales y homosexuales, respectivamente.

2.3.2 Evaluación de la satisfacción sexual

En segundo lugar, cabe mencionar los problemas asociados a la evaluación. Si bien es cierto que la satisfacción sexual es una experiencia personal y única, la mayoría de investigaciones nunca la definen, posiblemente debido a la presunción de que todas las personas saben lo que significa (Schwartz y Young, 2009). La carencia tanto de una definición concisa como de un marco teórico, en la mayoría de estudios, dio lugar a problemas en su evaluación y a deficiencias en el análisis de la misma.

La evaluación de la satisfacción sexual se ha realizado de múltiples maneras. Se han empleado más de 40 medidas diferentes que varían entre cuestionarios multi-ítem, instrumentos desarrollados *ad hoc*, ítems derivados de algunos instrumentos o un solo ítem. Sin embargo la mayoría de estos instrumentos no fueron desarrollados a partir de un modelo teórico y, por tanto, presentan ciertas limitaciones. En primer lugar, uno de los problemas hace referencia a la inclusión de ítems que evalúan aspectos de la sexualidad que no son satisfacción sexual sino más bien predictores de la misma (Lawrance y Byers, 1995; Sprecher y Cate, 2004; Stulhofer et al., 2010). Un ejemplo claro de ello es el Índice de Satisfacción Sexual (*Index of Sexual Satisfaction*, ISS; Hudson, Harrison y Crosscup, 1981; Santos Iglesias et al., 2009). Este instrumento incluye algunos ítems predictores de la satisfacción sexual pues evalúan aspectos del funcionamiento sexual, como por ejemplo la excitación (*"Para mí es sencillo excitarme sexualmente con mi pareja"*) o actitudes sexuales (*"Creo que el sexo es algo sucio y repugnante"*). Otro ejemplo de este tipo de autoinformes es el *Golombok-Rust Inventory of Sexual Satisfaction* (GRISS; Rust y Golombok, 1985), que incluye ítems que también evalúan aspectos asociados al funcionamiento sexual (*"¿Se excita sexualmente con facilidad?", "¿Le resulta imposible tener un orgasmo?"*). Una segunda limitación que presentan algunos de los instrumentos de evaluación empleados es la carencia de adecuadas propiedades psicométricas o la falta de información sobre estas (Lawrance y Byers, 1995). Por último, la limitación más relevante es la falta de una base teórica en el desarrollo de la mayoría de los instrumentos de evaluación de la satisfacción sexual (Lawrance y Byers, 1995; Stulhofer et al., 2010). Una excepción sería el *Interpersonal Exchange Model of Sexual Satisfaction Questionnaire* (IEMSSQ; Lawrance et al., 2011), pues está basado en el Modelo de Intercambio Interpersonal de Satisfacción Sexual (*Interpersonal Exchange Model of Sexual Satisfaction*, IEMSS; Lawrance y Byers, 1992, 1995), uno de los escasos modelos teóricos específicos sobre la satisfacción sexual. El IEMSSQ está compuesto por una medida que evalúa la satisfacción sexual general (*Global Measure of Sexual Satisfaction*; GMSEX), otra que evalúa la satisfacción con la relación de pareja (*Global Measure of Relationship Satisfaction*; GMREL), un cuestionario que evalúa tres de los cuatro componentes en los que se basa el modelo teórico, (*Exchange Questionnaire*; EQ) y un listado de intercambios sexuales que pueden ser considerados como beneficios y/o costes de las

relaciones sexuales. En resumen, este instrumento muestra tres fortalezas principales. La primera de ellas es que está basado en un modelo teórico, la segunda es que no incluye ítems predictores de la satisfacción sexual y, finalmente, presenta adecuadas propiedades psicométricas (Lawrance et al., 2011). Además, el IEMSSQ no solo incluye una medida para evaluar la satisfacción sexual, sino que está formado por varias medidas que permiten evaluar en conjunto todos los componentes del IEMSS. Dada la relevancia que tiene este instrumento y la ausencia de una adaptación española resulta imprescindible realizar una adaptación y validación del mismo con el fin de ofrecer una herramienta útil para la evaluación de la satisfacción sexual, tanto en investigación como en la práctica clínica, en el contexto español.

2.3.3 Investigación sobre la satisfacción sexual en España

En España son escasas las investigaciones interesadas en el estudio de la satisfacción sexual. Por una parte, hay resultados contradictorios respecto a los niveles de satisfacción sexual en función del género. En este sentido, una encuesta realizada por Durex (2007) mostró que había más mujeres sexualmente satisfechas (54%) que varones (44%), mientras que la encuesta llevada a cabo por el Ministerio de Sanidad y Política Social (2009) reveló que el 37,7% de las mujeres frente al 42,3% de los varones estaban muy satisfechos con sus relaciones sexuales. Los resultados obtenidos por Santos Iglesias et al. (2009) no mostraron diferencias estadísticamente significativas entre varones y mujeres. Por otra parte, la mayoría de los estudios realizados en población española han analizado la relación entre distintas variables y este constructo, sin existir ninguna investigación en la que la satisfacción sexual haya sido examinada con base en la aplicación de un modelo teórico (véase Carcedo et al., 2011; Carrobles, Gámez-Guadix y Almendros, 2011; Castellanos-Torres, Álvarez-Dardet, Ruiz-Muñoz y Pérez 2013; Fuertes, 2000; Ruiz-Muñoz et al., 2013; Yela, 2000). Las discrepancias encontradas en los estudios respecto a los niveles de satisfacción sexual entre varones y mujeres, así como la inexistencia de investigaciones basadas en la teoría sobre la satisfacción sexual en muestras españolas, son limitaciones que justifican la necesidad de realizar estudios en España que analicen la satisfacción sexual bajo un marco teórico sólido.

3. Objetivos generales de la Tesis Doctoral

Tal como se extrae de lo señalado en esta Introducción, la satisfacción sexual juega un papel relevante en la vida de las personas, pues va más allá de la sexualidad humana y de la salud sexual. Sin embargo, existen ciertos problemas y limitaciones que dificultan su investigación y su comprensión. Con el fin de aumentar el conocimiento sobre la satisfacción sexual y superar las limitaciones señaladas, se plantea la presente Tesis Doctoral con cinco objetivos principales. En primer lugar, se realizará una revisión sistemática con el objetivo de examinar las investigaciones previas en las que la satisfacción sexual haya sido la variable dependiente. En segundo lugar, se adaptará a población española y se examinarán las propiedades psicométricas del *Interpersonal Exchange Model of Sexual Satisfaction Questionnaire* (IEMSSQ; Lawrance et al., 2011), uno de los escasos instrumentos de evaluación basados en un modelo teórico consolidado y que supera las limitaciones que presentan la mayoría de autoinformes. El tercer objetivo será analizar la satisfacción sexual en población española empleando la adaptación del IEMSSQ y examinar la relación entre diferentes variables y la satisfacción sexual. Finalmente, con el propósito de superar las limitaciones asociadas a los estudios no guiados por una teoría, el cuarto objetivo consistirá en examinar la validez de un modelo teórico, el Modelo de Intercambio Interpersonal de Satisfacción Sexual (IEMSS; Lawrance y Byers, 1992, 1995) en parejas heterosexuales españolas, mientras que el quinto será poner a prueba un modelo predictivo de la satisfacción sexual basado en la Teoría Ecológica del desarrollo humano (Bronfenbrenner, 1994) para examinar los factores asociados a la misma. Para ello, se realizaron cinco estudios independientes que se describen a continuación. Además de los cinco objetivos generales señalados, un objetivo específico y común en cuatro de los cinco estudios fue analizar diferencias de género, teniendo en cuenta que los resultados sobre la satisfacción sexual de varones y mujeres españoles son contradictorios.

4. Estructura de la Tesis Doctoral

4.1. Revisión sistemática sobre la satisfacción sexual

El primer estudio consistió en la realización de una revisión sistemática sobre la satisfacción sexual con el fin de obtener información sobre las investigaciones previas llevadas a cabo y las variables asociadas a la satisfacción sexual. Se obtuvo información sobre la autoría y el año de publicación, metodología empleada, muestra evaluada, instrumentos de evaluación utilizados y principales resultados obtenidos en cada uno de los estudios. Además, las variables predictoras fueron clasificadas de acuerdo a los niveles propuestos por el modelo ecológico (Bronfenbrenner, 1994). Esta revisión sintetiza los principales resultados hallados en la literatura, así como las limitaciones de las investigaciones centradas en el estudio de la satisfacción sexual. Por tanto, resulta fundamental para el desarrollo de los siguientes estudios de la presente Tesis Doctoral.

4.2. Adaptación y validación del *Interpersonal Exchange Model of Sexual Satisfaction Questionnaire* (IEMSSQ) en población española

El segundo estudio tuvo como objetivo adaptar y validar en población española uno de los pocos instrumentos que está basado en un modelo teórico de la satisfacción sexual, el *Interpersonal Exchange Model of Sexual Satisfaction Questionnaire* (IEMSSQ; Lawrance et al., 2011). Una vez traducido y adaptado lingüísticamente se examinaron sus propiedades psicométricas. Se analizó su fiabilidad de consistencia interna y su fiabilidad test-retest; además, se examinó la validez de constructo y la validez concurrente. Por último, se exploraron las diferencias de género en satisfacción sexual y en el resto de medidas que incluye el IEMSSQ.

4.3. Descripción de la satisfacción sexual en una muestra española

El tercer estudio tuvo como objetivo examinar los niveles de satisfacción sexual en hombres y mujeres españoles que mantenían una relación de pareja heterosexual u homosexual. Además, se analizó la relación entre variables sociodemográficas (género, orientación sexual, edad y nivel educativo), indicadores de salud física y mental, y variables interpersonales (satisfacción con la relación de pareja, tipo de relación, número de parejas sexuales y duración de la relación) con la satisfacción sexual. Por

último, se llevó a cabo un modelo de regresión con el fin de conocer las variables predictoras de la satisfacción sexual en la muestra evaluada.

4.4. Validación de un modelo teórico para el estudio de la satisfacción sexual en una muestra española: Modelo de Intercambio Interpersonal de Satisfacción Sexual

El cuarto estudio se realizó con el objetivo de validar en parejas heterosexuales españolas un modelo teórico de la satisfacción sexual: el Modelo de Intercambio Interpersonal de Satisfacción Sexual (*Interpersonal Exchange Model of Sexual Satisfaction*, IEMSS; Lawrance y Byers, 1992, 1995). Se describieron los niveles de satisfacción sexual y se analizaron diferencias de género; mediante un modelo de ecuaciones estructurales se examinó la validez del IEMSS.

4.5. Validación de un modelo predictivo de la satisfacción sexual: modelo ecológico para explicar los factores asociados

Por último, el quinto estudio se llevó a cabo con el objetivo de poner a prueba un modelo predictivo para explicar la satisfacción sexual de varones y mujeres heterosexuales españoles. Para ello se tuvo en cuenta la Teoría Ecológica (Bronfenbrenner, 1994). En este estudio, a diferencia del realizado por Henderson et al. (2009), la muestra estuvo compuesta por varones y mujeres y además, se incluyeron variables no examinadas en la investigación anterior (Henderson et al., 2009) como las actitudes sexuales, la asertividad sexual y variables pertenecientes al macrosistema. En concreto, se analizó la relación de variables individuales (depresión y actitudes sexuales), interpersonales (satisfacción con la relación, funcionamiento sexual y asertividad sexual), sociales (apoyo social, paternidad y nivel socioeconómico) y culturales (ideología política, religión profesada y práctica religiosa) con la satisfacción sexual. Se analizaron diferencias de género y mediante dos modelos de ecuaciones estructurales se comprobó el ajuste del modelo examinado en varones y en mujeres.

ESTUDIO 1

A Systematic Review of Sexual Satisfaction

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A Systematic Review of Sexual Satisfaction

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Abstract

The present theoretical study is a systematic review of research publications in which sexual satisfaction was the dependent variable. After conducting a literature search in major electronic databases and following a selection process, we provide a summary of the main findings of 197 scientific papers published between 1979 and 2012. The review revealed the complexity and importance of sexual satisfaction, which was associated with the following variables and factors: a) individual variables such as socio-demographic and psychological characteristics as well as physical and psychological health status; b) variables associated with intimate relationships and sexual response; c) factors related to social support and family relationships; and d) cultural beliefs and values such as religion. In conclusion, we observed that sexual satisfaction is a key factor in individuals' sexual health and overall well-being. However, despite its importance, there is a lack of theoretical models combining the most important factors to explain sexual satisfaction.

Keywords: sexual satisfaction, human sexuality, Ecological Theory, systematic review, theoretical study.

A Systematic Review of Sexual Satisfaction

There are several definitions of sexual satisfaction. One of the most accepted definitions was proposed by Lawrance and Byers (1995), who defined it as "an affective response arising from one's subjective evaluation of the positive and negative dimensions associated with one's sexual relationship" (p. 268). Sexual satisfaction is a relevant component of human sexuality that is considered to be the last stage of the sexual response cycle (Basson, 2001; Sierra & Buela-Casal, 2004) and a sexual right (World Health Organization, 2010). It is also a key factor in individuals' overall quality of life. For example, better state of physical and psychological health (Scott, Sandberg, Harper, & Miller, 2012) and overall well-being (Dundon & Rellini, 2010) and quality of life (Davison, Bell, LaChina, Holden, & Davis, 2009) have been associated with high sexual satisfaction. Similarly, relational aspects such as high relationship satisfaction (Henderson, Lehavot, & Simoni, 2009), communication with one's partner (MacNeil & Byers, 2009), and sexual assertiveness (Haavio-Manila & Kontula, 1997) have been found to be related to greater sexual satisfaction. Some studies have found a relationship between good sexual functioning and high sexual satisfaction (Henderson et al., 2009). Other variables such as social support (Henderson et al., 2009), good relationships with the children and family, and higher socio-economic status (Ji & Norling, 2004) have also been associated with high levels of sexual satisfaction. Religiosity has also been taken into account to explain sexual satisfaction: low religious belief has been associated with greater sexual satisfaction (Higgins, Trussell, Moore, & Davidson, 2010).

Since sexual satisfaction can be affected by individual or relational characteristics as well as variables such as social support or religion, it is interesting to explain it in the framework of ecological theory (Bronfenbrenner, 1994). According to this theory, individual development is affected by the interaction between individual characteristics and environmental and social conditions, which are organized into four interrelated levels: the microsystem, mesosystem, exosystem, and macrosystem. This theory can be useful to develop predictive models and classify variables associated with sexual satisfaction. An example of this is the use of the ecological model to study sexual satisfaction. It was proposed by Henderson et al. (2009), who explored the effect of variables corresponding to the microsystem level (i.e., depression, child sexual abuse,

and internalized homophobia), the mesosystem level (i.e., relationship satisfaction and sexual functioning), and the exosystem level (i.e., social support and parenthood) in women. Results revealed that depressive symptoms, internalized homophobia (in lesbians), satisfaction with the relationship, sexual functioning, and social support were variables associated with sexual satisfaction. In this adaptation of ecological theory to the study of sexual satisfaction, the microsystem refers to individual characteristics (e.g., gender, age, personality, self-esteem), the mesosystem refers to intimate relationships, that is, the immediate environment of the individual (e.g., marital satisfaction, communication, sexual assertiveness, sexual functioning, sexual dysfunction), the exosystem refers to social networks or social status (e.g., family relationships, parenthood, social support, socioeconomic status), and the macrosystem refers to institutional and social factors (e.g., political ideology, religious beliefs) (Brofenbrenner, 1994; Henderson et al., 2009).

Considering the importance of sexual satisfaction and the lack of review studies in this area, the aim of the present theoretical study was to conduct a systematic review of the variables associated with sexual satisfaction, taking into account the standards proposed by Perestelo-Pérez (2013). This study had two main objectives: first, to classify and summarize the variables associated with sexual satisfaction; second, since we intended to classify the variables according to the ecological theory proposed by Henderson et al. (2009), we expected the review to be useful to develop future research and predictive models of sexual satisfaction.

Method

Literature review

The literature search was conducted in the EBSCOhost and ProQuest search platforms, which include numerous databases on different subject areas, and in the following electronic databases: PsycINFO, PubMed, Scopus, and Web of Science. The search terms used were "sex* satisf*", "satisf* sex*", and "satisfaction with sex". We also used the following terms in Spanish: "*satisf* sex**", "*satisfacción con la relación sexual*", and "*satisfacción con la vida sexual*". The search was limited to the title of scientific articles published in English or Spanish through 2012, with no restriction of subject area.

Inclusion criteria

Of the research studies in which sexual satisfaction was the dependent variable or criterion, we selected only those that were aimed at explaining sexual satisfaction.

Procedure

First, we conducted the search in the above-mentioned platforms and electronic databases between January and May 2013. After compiling the studies, we classified them by year of publication and read them, identifying those that met the inclusion criteria. When there were doubts about whether the studies met the inclusion criteria, they were read by two reviewers and selected or discarded by consensus. Finally, we recorded relevant information in an *ad hoc* database to sort the publications and summarize the main results.

Encoding results

We extracted the following information from each of the studies that met the inclusion criteria.

- Author(s) and year of publication.
- Study methodology. Study design was identified according to the classification proposed by Montero and León (2007).
- Sample. We recorded the number of participants, gender, sexual orientation, and type of sample (i.e., non-clinical adolescents, clinical adolescents, non-clinical college students, clinical college students, non-clinical general population, and clinical general population). General population was understood to refer to participants who were neither adolescents nor college students.
- Assessment instrument. We identified the instrument used to assess sexual satisfaction.
- Key findings. We identified the variables associated with sexual satisfaction and classified them according to the levels proposed by Henderson et al. (2009) based on the ecological theory (Bronfenbrenner, 1994): microsystem, mesosystem, exosystem, and macrosystem.

Results

Altogether, we found 290 articles, of which 93 were excluded for not meeting the inclusion criteria. Thus, we selected 197 articles, which were the subject of this

review[1]. The articles reviewed were published between 1979 and 2012. According to the methodology used, 171 (86.8%) were ex post facto, 14 (7.1%) were quasi-experimental, 8 (4.1%) were experimental, and 4 (2%) were instrumental. According to the type of sample used, 98 studies (49.7%) used non-clinical general population samples, 42 (21.3%) used clinical general population samples, 33 (16.8%) used non-clinical college student samples, and one study used a non-clinical adolescent sample. The remaining studies used samples of various types (e.g., non-clinical samples of college students and adolescents). Regarding gender, 55.8% of studies (n = 110) included men and women, 28.4% (n = 56) included only women, and 15.7% (n = 31) included only men. Finally, 99 studies (50.3%) included heterosexual participants, 2 (1%) included homosexuals, 26 (13.2%) included participants with different types of sexual orientation, and 70 (35.5%) studies did not provide any information about sexual orientation.

The authors of the articles reviewed assessed sexual satisfaction by using over 40 different instruments and items derived from self-reports or *ad hoc* questionnaires. The questionnaires most frequently used were: the Index of Sexual Satisfaction (ISS; Hudson, Harrison, & Crosscup, 1981), used in 24 studies (12.2%); the Global Measure of Sexual Satisfaction (GMSEX; Lawrance & Byers, 1995), used in 19 studies (9.6%); the *Satisfaction with intercourse* and *Overall satisfaction* subscales of the International Index of Erectile Function (IIEF; Rosen et al., 1997) in 11 studies (5.6%); the Golombok-Rust Inventory of Sexual Satisfaction (GRISS; Rust & Golombok, 1985) in ten studies (5.1%); and the subscale of Derogatis Sexual Function Inventory (DSFI; Derogatis & Melisaratos, 1979) and the Pinney Sexual Satisfaction Inventory (PSSI; Pinney, Gerrard, & Denney, 1987) in six studies (3%). In addition, 25 studies (12.7%) used a single item, seven (3.6%) questionnaires were developed *ad hoc,* and 11 publications (5.6%) did not report the use of an instrument.

As for the classification of variables associated with sexual satisfaction, 36% (n = 71) of studies included microsystem variables, 26.4% (n = 52) used mesosystem variables, 0.5% (n = 1) referred to exosystem variables, 1% (n = 2) dealt with

[1]The full list of the 197 articles reviewed, including sample characteristics, instruments used to assess sexual satisfaction, and key findings, can be consulted on the appendix section.

macrosystem variables, and 36% (n = 71) included variables from two or more levels. Table 1 lists the variables associated with sexual satisfaction, organized according to ecological theory levels.

Table 1

Variables asociated with sexual satisfaction, classified according to ecological theory levels

Microsystem

- Psychological disorders, psychotropic drugs
- Physical health, disease, disability, physical functioning, social functioning, vitality, physical exercise, care dependency, menopause, medical treatments
- Surgical procedures: circumcision, vasectomy, hysterectomy
- Pregnancy and type of delivery
- Tobacco, alcohol
- Well-being and quality of life
- Personality, selfishness, perfectionism, ability to solve problems
- Locus of control, attributions, autonomy, experiential avoidance, environmental mastery, personal growth, life satisfaction, self-actualization, differentiation of self, social desirability
- Self-esteem, self-concept, sexual self concept, sexual self-confidence, body image, weight, body mass index, evaluation reflects
- Gender role, sexual role
- Sexual attitudes, sexual thoughts, sexual guilt, internalized homophobia, watching pornography, importance attributed to sex
- Sexual abuse, rape
- Socio-demographic variables: age, gender, race, sexual orientation, educational background, sexual information, previous sexual experience, number of sexual partners, residence location

Mesosystem

- Couple relationship: Relationship satisfaction, dyadic adjustment, intimacy, commitment, love, partner support, equity, household division of labor, mutual social behavior, stability, marital status, length of relationship, communication, conflict resolution, infidelity, marital therapy
- Attachment
- Sexual assertiveness

- Sexual functioning: Desire, arousal, erection, orgasm
- Sexual dysfunctions
- Sexual rewards and cost, equity of rewards and cost, frequency of sex, sexual behavior, hedonistic behavior, performance anxiety, sexual interest and motivation, propensity to excitation, contraceptives, lubricant
- Infertility

Exosystem

- Social support, discrimination
- Family relationships, affection, responsibility
- Parenthood
- Current status of life
- Stress: financial, family and work stress
- Socioeconomic status, resources

Macrosystem

- Religion
- Spirituality
- Cultural conflicts

Microsystem

Results show that a higher level of well-being was associated with increased sexual satisfaction (Dundon & Rellini, 2010). For example, the presence of depression, anxiety, or stress (De Ryck, Van Laeken, Nöstlinger, Platteau, & Colebunders, 2012), use of antidepressant drugs (Mosack et al., 2011), and spinal cord injuries as well as chronic diseases (e.g., rheumatoid arthritis, ankylosing spondylitis, diabetes mellitus, and hypertension; Akkuş, Nakas, & Kalyoncu, 2010; Althof et al., 2010; Mendes Cardoso, & Savall, 2008) were associated with lower sexual satisfaction. Conversely, greater physical performance and better overall health were found to predict higher sexual satisfaction (McCall-Hosenfeld et al., 2008).

Some surgical procedures such as circumcision (Cortés-González, Arratia-Maqueo, Martinez-Montelongo, & Gómez-Guerra, 2009) and vasectomy (Arratia-Maqueo, Cortés-González, Garza-Cortés, & Gómez-Guerra, 2010) were not found to have an effect, while hysterectomy was associated with lower sexual satisfaction

(Sözeri-Varma, Kalkan-Oguzhanoglu, Karadağ, & Özdel, 2011). Some studies also explored the effect of various drugs for the treatment of sexual dysfunctions. In this regard, most findings revealed a positive effect of such drugs on sexual satisfaction (Carson & Wyllie, 2010; Dinsmore & Wyllie, 2009).

Moreover, personality also influences sexual satisfaction. For example, men and women reported greater sexual satisfaction when their partners had personality traits similar to theirs (Farley & Davis, 1980). Sexual victimization was also related to low satisfaction (Orlando & Koss, 1983).

Regarding gender roles, the masculine role in men (Daniel & Bridges, 2012) and the feminine role in women (Pedersen & Blekesaune, 2003) were associated with high sexual satisfaction. However, Rosenzweig and Dennis (1989) found that both men and women who perceived their role as feminine or androgenic reported greater sexual satisfaction than those who perceived it as undifferentiated. As regards sexual attitudes, erotophilia (Hurlbert, Apt, & Rabehl, 1993) and low sexual guilt (Higgins et al., 2010) predicted greater satisfaction with sexual intercourse. The findings of studies on the effect of self-esteem and body image revealed that high self-esteem and a positive body image predicted greater sexual satisfaction (Higgins, Mullinax, Trussell, Davidson, & Moore, 2011; Pujols, Meston, & Seal, 2010). Finally, watching pornography was associated with lower sexual satisfaction (Yucel & Gassanov, 2010).

Finally, numerous socio-demographic variables were associated with sexual satisfaction. Regarding gender, some studies revealed that women reported more sexual satisfaction than men (Rehman, Rellini, & Fallis, 2011), while others found the opposite results (Ji & Norling, 2004). However, among the studies reviewed, those whose results did not show any differences between men and women were more numerous (McClelland, 2011; Santos-Iglesias et al., 2009). As for age, some studies suggested that it had a negative effect on sexual satisfaction (De Ryck et al., 2012), while others indicated the opposite (Young, Denny, Young, & Luquis, 2000). Race was also explored. Results showed that being white was associated with increased satisfaction (McCall-Hosenfeld et al., 2008), while being black was associated with lower sexual satisfaction (Carpenter, Nathanson, & Kim, 2009). Concerning sexual orientation, homosexuality was associated with increased sexual satisfaction in some studies

(Henderson et al., 2009). By contrast, Dixon (1985) reported that heterosexual men indicated greater satisfaction than homosexuals and bisexuals, whereas McClelland (2011) did not find any significant differences as a function of sexual orientation. Finally, a high level of education (Carpenter et al., 2009) and a low number of sexual partners (Heiman et al., 2011) were generally associated with high sexual satisfaction.

Mesosystem

According to the results of the studies reviewed, sexual satisfaction was high among individuals who had a satisfactory relationship (Henderson et al., 2009), good dyadic adjustment (Dundon & Rellini, 2010), greater intimacy (Rubin & Campbell, 2012) and communication (MacNeil & Byers, 2009), and the support of their partner (Blackmore, Hart, Albiani, & Mohr, 2011). As regards attachment, results suggested that high levels of anxious and avoidant attachment (Butzer & Campbell, 2008) or ambivalent attachment (Clymer, Ray, Trepper, & Pierce, 2006) were associated with low sexual satisfaction. Regarding length of the relationship, overall longer duration of the relationship was found to decrease sexual satisfaction (Rainer & Smith, 2012). In addition, having a partner (Pedersen & Blekesaune, 2003), cohabiting with a partner, being married (Lau, Kim, & Tsui, 2005), and having an exclusive relationship (Higgins et al., 2011) were associated with higher sexual satisfaction, while infidelity was considered to predict lower satisfaction (Yucel & Gassanov, 2010). Moreover, satisfactory resolution of conflicts (Mitchell & Boster, 1998) and marital therapy (Bennun, Rust, & Golombok, 1985; Botlani, Shahsiah, Padash, Ahmadi, & Bahrami, 2012) predicted greater levels of satisfaction with sexual intercourse. Finally, sexual assertiveness was also associated with high sexual satisfaction (Haavio-Mannila & Kontula, 1997; Hurlbert et al., 1993).

Numerous studies also revealed the existence of a relationship between sexual functioning and satisfaction. Desire, arousal, and orgasm consistency were associated with higher sexual satisfaction (Hurlbert et al., 1993). Conversely, lack of desire, vaginal dryness, erectile dysfunction, premature ejaculation, inability to reach orgasm, and pain during sex were associated with lower sexual satisfaction (Smith et al., 2012). Moreover, frequency of sex and variety of sexual behaviors were associated with increased sexual satisfaction (Haavio-Mannila & Kontula, 1997; Hurlbert et al., 1993).

Exosystem

Compared to studies with microsystem or mesosystem variables, we found fewer studies involving exosystem variables. Results suggested that social support (Henderson et al., 2009), good relationship with children and the family, and high socioeconomic status predicted greater sexual satisfaction (Ji & Norling, 2004).

Macrosystem

Results about the relationship between religion and sexual satisfaction are diverse. Davidson, Darling, and Norton (1995) did not find any differences in levels of sexual satisfaction as a function of religious practice. By contrast, Higgins et al. (2010) found that religiosity was associated with low sexual satisfaction in white men and women. Lastly, Peitl, Peitl, and Pavlovic (2009) concluded that participants with schizophrenia and who professed the Roman Catholic religion reported greater satisfaction, whereas religion was not associated with sexual satisfaction in participants with depression or healthy participants.

Discussion

Of the articles reviewed, 66.2% were published between 2005 and 2012. This growing interest may be due to the fact that, in 2002, the World Health Organization (WHO), in cooperation with the World Association for Sexual Health (WAS), highlighted the importance of sexual health, including key factors such as information and sexual pleasure. The studies reviewed were conducted with a variety of sample types, although 35.5% of them did not report the sexual orientation of the participants. It would be interesting for future studies to include this information in order to further explore the relationship between sexual satisfaction and sexual orientation and try to clarify the conflicting results found to date.

It is worth noting that sexual satisfaction was assessed with a broad variety of instruments, of which only two were based on theoretical conceptualizations of sexual satisfaction: the New Sexual Satisfaction Scale (NSSS; Štulhofer, Buško, & Brouillard, 2010) and the Global Measure of Sexual Satisfaction (GMSEX; Lawrance & Byers, 1995). Both questionnaires are useful in both research and clinical practice, and both share the fact of considering the interpersonal context in which sex relations occur.

The review revealed that sexual satisfaction was influenced not only by individual and relational factors but also by more distal variables related to individuals' social and cultural environment. As a result, ecological theory was found to be useful to classify such variables and factors. As regards individual (i.e., microsystem) variables, results revealed that both physical and psychological health are associated with satisfaction. Considering that diseases such as arthritis, diabetes, or hypertension were associated with sexual problems (Akkuş et al., 2010; Althof et al., 2010) and with difficulties in maintaining an intimate relationship (Moin, Duvdevany, & Mazor, 2009), it is not surprising to note that sexual satisfaction decreased, since sexual functioning is a predictor of sexual satisfaction. Similarly, depression, anxiety, and stress were associated with decreased sexual arousal (Lykins, Janssen, Newhouse, Heiman, & Rafaeli, 2012; Mosack et al., 2011) and with difficulties in communicating with one's partner (Scott et al., 2012), which led to lower satisfaction with the sexual relationship. It is essential for clinical practitioners to report on the negative impact of physical disease, psychological disorders, and drugs on sexuality and to promote communication between partners about their sexual concerns and expectations.

Studies on the role of sexual attitudes (Hurlbert et al., 1993) and self-esteem (Higgins et al., 2011) have shown a positive relationship between such variables and sexual satisfaction. These results are not surprising given that individuals with more liberal sexual attitudes experience their sexuality without guilt, which is associated with increased satisfaction (Higgins et al., 2010). In addition, high self-esteem is associated with less distracting thoughts during sex, leading to greater sexual satisfaction (Pujols et al., 2010).

Results on gender are contradictory (Petersen & Hyde, 2010; Rehman et al., 2011; Santos-Iglesias et al., 2009). A possible explanation for the differences between men and women reported by some studies may be the use of self-reports that include predictor items of sexual satisfaction. Lawrance and Byers (1995) found that men identified physical aspects of the relationship as rewards, while women identified relational aspects as rewards. Therefore, women are likely to express lower sexual satisfaction than men if the assessment instruments include items that refer to physical aspects. The opposite is likely to happen if questionnaires include more items that refer to relational aspects. Thus, although this hypothesis remains to be tested, when assessing sexual satisfaction it would be advisable to use self-reports composed of items

that assess individuals' feelings about the quality of their sexual relationship rather than items related to physical or relational aspects (Lawrance & Byers, 1995).

Another socio-demographic variable explored in some studies was age, whose increase was found to have a negative impact on sexual satisfaction (De Ryck et al., 2012). Older age was associated with less frequent sexual activity (Lindau & Gavrilova, 2010), lower frequency of sexual thoughts (Moyano & Sierra, 2013), increased sexual dysfunction (Sierra, Vallejo-Medina, Santos-Iglesias, & Lameiras Fernandez, 2012; Trompeter, Bettencourt, & Barrett-Connor, 2012), and presence of chronic diseases. All these factors are known to decrease satisfaction. However, some studies revealed that older people reported being satisfied with their sexual relationship (Gades et al., 2009), suggesting that other predictors of sexual satisfaction such as greater intimacy with one's partner and/or positive sexual attitudes are able to mediate the negative effect of age (Sierra et al., in press).

As regards relational (i.e., mesosystem) variables, there was consensus in the findings. Individuals who had a satisfactory relationship and those who reported greater sexual communication and assertiveness reported greater sexual satisfaction (Henderson et al., 2009; Hurlbert et al., 1993; MacNeil & Byers, 2009). From the perspective of social exchange, relationship satisfaction can be considered as a reward that leads to higher sexual satisfaction (Lawrance & Byers, 1995). In addition, communication and sexual assertiveness make it more likely for partners to know about pleasant and unpleasant behaviors and therefore increase positive behaviors and decrease negative ones. This is likely to lead to greater overall and sexual satisfaction (MacNeil & Byers, 2005, 2009). It is also interesting to note the positive impact of marital therapy, which promotes communication, intimacy, and relationship satisfaction; as a result, sexual satisfaction increases (Bennun et al., 1985; Botlani et al., 2012). Overall, results suggest that good sexual functioning predicts high satisfaction (Heiman et al., 2011; Smith et al., 2012). However, our review highlighted the lack of studies using psychophysiological measures to explore the relationship between arousal and sexual satisfaction. Future experimental research on the relationship between sexual response and satisfaction experimentally should clarify the role of arousal in sexual satisfaction.

Moreover, few studies addressed the relationship between social support (i.e., exosystem) and sexual satisfaction. A good family relationship and high socioeconomic level seemed to be positively related with sexual satisfaction (Ji & Norling, 2004). In fact, family, work, and financial stress were found to have a negative effect on sexual satisfaction (Lau et al., 2005).

Finally, regarding macrosystem variables, the relationship between religion and sexual satisfaction has led to contradictory results (Davidson et al., 1995; Higgins et al., 2010). Future studies should explore the relationship between religiosity and other variables such as satisfaction with the relationship, sexual guilt, and sexual attitudes. For example, Woo, Morshedian, Brotto, and Gorzalka (2012) indicated that the religiosity combined with sexual guilt led to a decrease in sexual desire. Moreover, Sierra, Ortega, and Gutierrez-Quintanilla (2008) found that lower religious practice and left-wing ideology were factors associated with erotophilia. As a result, such relationships should be considered in studies exploring the effects of macrosystem variables on sexual satisfaction.

Despite the importance of sexual satisfaction and the multitude of variables associated, as explained above, it is worth noting that there are few theoretical approaches to the study of sexual satisfaction. The few exceptions to this are the proposals made by Lawrance and Byers (Interpersonal Exchange Model of Sexual Satisfaction; 1995), the Sexual Knowledge and Influence Model (Cupach & Metts, 1991; Metts & Cupach, 1989) and other perspectives such as the Sexual Scripts Theory, which may help explain the gender-based differences in sexual satisfaction (Simon & Gagnon, 1984, 1987). In this regard, the adaptation of ecological theory to the study of sexual satisfaction conducted by Henderson et al. (2009) is useful to classify the variables associated with sexual satisfaction, as we did in this systematic review. We consider that this proposal will facilitate the development of future predictive models of sexual satisfaction and reveal the relationships between the different variables and the possible mediating effects of some of them. Mesosystem variables, especially relationship satisfaction and sexual functioning, often function as mediating variables between the microsystem and the exosystem and sexual satisfaction. For example, psychological distress is associated with marital problems and lower sexual functioning, which lead to decreased sexual satisfaction. In turn, relationship satisfaction can

mediate the relationship between social support and sexual satisfaction (Henderson et al., 2009).

In conclusion, this systematic review makes it clear that sexual satisfaction can be affected by many factors, and that the ecological theory framework is useful to classify them. Therefore, in the clinical setting, the assessment of variables from the microsystem, mesosystem, exosystem, and macrosystem levels will reveal which elements affect sexual satisfaction. Future studies should explore the relevance of each of these factors and the relationships between them.

Finally, a limitation of the review is related to the search criteria (i.e., terms limited to the title) and the fact that we included only scientific papers published in English or Spanish in which sexual satisfaction was the dependent variable.

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Appendix

Articles published in the period 1979-2012 that included sexual satisfaction (SS) as the dependent variable (*N* = 197).

Author	*Sample*	*Assessment Instrument*	*Key findings*	*Level*
Abdo et al. (2008)	Clinical general population: Heterosexual men with erectile dysfunction (*N* = 115)	Male Sexual Quotient (MSQ)	Participants assigned to the sildenafil + counseling group reported significantly greater SS than participants assigned to the counseling and sildenafil groups	Mic.
Akkuş et al. (2010)	Clinical general population: Men and women with rheumatoid arthritis (*n* = 18) and with ankylosing spondylitis (*n* = 15). Did not report sexual orientation	1 item	Participants reported significantly lower SS after the onset of the disease, when the disease caused stress and changes in sexual life, and when drugs affected sexual life. Women reported significantly lower SS than men, and patients with rheumatoid arthritis reported significantly lower SS than patients with ankylosing spondylitis	Mic.

Althof et al. (2010)	Clinical general population: Men with erectile dysfunction (*N* = 3,935). Did not report sexual orientation	International Index of Erectile Function (IIEF)	Participants who reported being sexually satisfied showed less severe erectile dysfunction, shorter duration of erectile dysfunction, more sexual attempts, were younger, and were more likely to live in EU/Mediterranean and Central and South America. In addition, vascular disorder, diabetes mellitus, and hypertension were significantly less frequent in sexually satisfied participants. The probability that such participants had previously taken sildenafil or calcium channel blockers was also lower	Mic. Mes.
Althof et al. (2006)	General clinical and non-clinical population: Heterosexual men with premature ejaculation (*n* = 149) and healthy men (*n* = 152)	Index of Premature Ejaculation (IPE)	Men with premature ejaculation reported significantly lower SS than healthy men	Mes.

Álvarez-Goyou et al. (2005)	Non-clinical general population: Men (n = 318) and women (n = 441). Did not report sexual orientation	*Ad hoc* questionnaire	Participants with higher educational levels reported greater SS Participants who had been in a relationship for 6-9 years or for 24-30 years reported significantly lower SS than participants who maintained a relationship with other relationship duration	Mic. Mes.
Arratia-Maqueo et al. (2010)	Non-clinical general population: Heterosexual men with vasectomy (N = 29)	Spanish version of International Index of Erectile Function (IIEF)	No significant differences in SS before and after vasectomy	Mic.
Auslander et al. (2007)	Non-clinical adolescents (n = 135) and college students (n = 178): Men and women. Did not report sexual orientation	7 items	A positive relationship with one's partner, being emotionally less sensitive to interpersonal relationships, frequency of sexual activity, having fewer sexual partners, and increased condom use were associated with higher SS	Mic. Mes.

Barrientos & Páez (2006)	Non-clinical general population: Men (*n* = 2,244) and women (*n* = 3,163). Did not report sexual orientation	1 item	Being in love, having had a good sexual life in the past, finding new emotions, high educational level, being married, believing that the relationship will continue in the next 12 months, orgasm, desired intercourse with one's partner, believing that it is possible to change negative aspects of the sexual relationship, and early sexual initiation were associated with higher SS	Mic. Mes.
Bélanger et al. (2001)	General clinical and non-clinical population: Heterosexual couples who attended marital therapy (*n* = 95) and healthy couples (*n* = 97)	French version of Index of Sexual Satisfaction (ISS)	Among wives, low SS was associated with husbands' state anger and their own trait anger, anger-in, and anger-out. These variables accounted for 29% of SS Among husbands, low SS was associated with their own state anger and anger-in, and with wives' anger-out. These variables accounted for 32% of SS	Mic.

Benazon et al. (1992)	Clinical general population: Heterosexual couples in which the woman did not become pregnant during fertility treatment (n = 117) and couples in which she became pregnant (n = 47)	French version of Index of Sexual Satisfaction (ISS)	Women who became pregnant during fertility treatment reported significantly greater SS than women who did not become pregnant	Mes.
Bennun et al. (1985)	Clinical general population: Heterosexual couples who requested marital therapy (N = 20)	Golombok Rust Inventory of Sexual Satisfaction (GRISS)	Men and women reported significantly greater SS after behavioral marital therapy	Mes.
Biss & Horne (2005)	Non-clinical general population: Homosexual men (n = 380) and women (n = 216)	Sexual Satisfaction Subscale of the Extended Satisfaction with Life Scale (ESWLS)	In women, higher age was associated with low SS, and the current living situation and environmental mastery were associated with higher SS. These variables accounted for 8% of SS In men, current life, life satisfaction, and personal growth were associated with greater SS. These variables accounted for 16% of SS	Mic. Exo.

Black et al. (1998)	General clinical and non-clinical population: Women with spinal cord injury (n = 84) and healthy women (n = 37). Did not report sexual orientation	Subscale of Derogatis Sexual Function Inventory (DSFI)	Women with spinal cord injury reported significantly lower SS than healthy women No significant differences in sexual satisfaction were found between married women with spinal cord injury and healthy women Increasing age was associated with lower SS in women with spinal cord injury, and with higher SS in healthy women	Mic. Mes.
Blackmore et al. (2011)	Clinical general population: Men (n = 19) and women (n = 62) with multiple sclerosis. Did not report sexual orientation	Sexual Satisfaction Survey (SSS)	Positive support from the partner was associated with greater SS. This variable accounted for 33.9% of SS	Mes.
Botlani et al. (2012)	Clinical general population: Heterosexual couples who attended counseling centers (N = 30)	*Ad hoc* questionnaire	Couples who received couple therapy based on attachment theory reported significantly greater SS than couples who received traditional couple therapy	Mes.
Bridges & Horne (2007)	Non-clinical general population: Lesbian and bisexual women (N = 1,072)	Sexual Satisfaction Subscale of the Extended Satisfaction with Life Scale (ESWLS)	Length of the relationship was associated with lower SS, and relationship satisfaction and desire discrepancy not being a problem were associated with higher SS. These variables accounted for 30.5% of SS	Mes.

Bridges et al. (2004)	Non-clinical general population: Women (*N* = 2,632). Did not report sexual orientation	Sexuality of Women: A Survey	Family affection, partner initiation, and communication were associated with higher SS. These variables accounted for 20.5% of SS	Mes. Exo.
Butzer & Campell (2008)	Non-clinical general population: Heterosexual couples (*N* = 116)	Enriching and Nurturing Relationship Issues, Communication, and Happiness (ENRICH) Index of Sexual Satisfaction (ISS)	High levels of anxious and avoidant attachment were associated with low SS (own effects) Participants with partners with avoidant attachment reported low SS (partner effects)	Mes.
Byers (2005)	Non-clinical general population: Heterosexual men and women (*N* = 87)	Global Measure of Sexual Satisfaction (GMSEX)	Changes in the level of relationship satisfaction were associated with changes in the level of SS	Mes.
Byers & Demmons (1999)	Non-clinical college students: Men (*n* = 47) and women (*n* = 52). Did not report sexual orientation	Global Measure of Sexual Satisfaction (GMSEX)	Non-sexual self-disclosure accounted for 24% of SS Relationship satisfaction and the following components of the Interpersonal Exchange Model of Sexual Satisfaction (IEMSS): rewards, costs, relative rewards, relative costs, equal rewards, and equal costs, accounted for 79% of SS	Mes.

Byers et al. (1998)	Non-clinical college students: Men (*n* = 51) and women (*n* = 57). Did not report sexual orientation	Global Measure of Sexual Satisfaction (GMSEX)	Greater relationship satisfaction, more favorable relative rewards/relative costs, and more equal rewards and costs between partners were associated with greater SS. These variables accounted for 75% of SS	Mes.
Byers & MacNeil (2006)	Study 1. Non-clinical general population: Heterosexual men and women (*N* = 79) Study 2. Non-clinical general population: Heterosexual couples (*N* = 104)	Global Measure of Sexual Satisfaction (GMSEX)	Study 1. Relationship satisfaction, rewards-costs, relative level of rewards and costs, equal rewards, and equal costs were associated with higher SS. These variables accounted for 79% of SS Study 2. SS was high when men and women reported higher rewards and lower costs. Moreover, SS was influenced by dyadic factors in both men and women	Mes.
Calogero & Thompson (2009)	Non-clinical college women (*N* = 101). Did not report sexual orientation	Sexual Satisfaction Scale (SSS)	Internalization of beauty ideals affected body surveillance, which entailed high body shame and low sexual self-esteem. These variables were associated with lower SS (indirect effects). In addition, body surveillance and body shame had direct negative effects on SS. These variables accounted for 30% of SS	Mic.

Carcedo et al. (2011)	Non-clinical general population: Prison inmates – heterosexual men (*n* = 70) and women (*n* = 70)	Sexual satisfaction subscale of the Multidimensional Sexual Self-Concept Questionnaire (MSSCQ)	Having a partner in or out of prison was associated with higher SS. These variables accounted for 36.2% of SS	Mes.

Carpenter et al. (2009)	Non-clinical general population: Heterosexual men (*n* = 484) and women (*n* = 551)	2 items	In women, longer duration of intercourse and thinking that men need more sex were associated with greater physical SS; being black, having had sexual problems in the past year, low sexual frequency, low occurrence of orgasm, and less duration of sexual activity were associated with lower physical SS. In men, sex with love was associated with high physical SS, and less duration of intercourse was associated with lower physical SS In women, good health and sex with love were associated with high emotional SS. Poor health, the presence of sexual problems in the past year, requiring a long time with a partner before having sex, low frequency of sexual activity in a year, and less duration of intercourse were associated with lower emotional SS. In men, high educational level and sex with love were associated with high emotional SS, while low frequency of sexual activity was associated with low emotional SS	Mic. Mes.

Carrobles et al. (2011)	Non-clinical college students: Heterosexual and lesbian women (*N* = 157)	Spanish version of Index of Sexual Satisfaction (ISS)	Sexual assertiveness and sexual motivation were associated with greater SS, and performance anxiety was associated with lower SS. These variables accounted for 41% of SS	Mes.
Carson & Wyllie (2010)	Clinical general population: Heterosexual men with premature ejaculation (*N* = 249)	Index of Premature Ejaculation (IPE) and Premature Ejaculation Profile (PEP)	Participants assigned to the PSD502 group reported significantly greater SS than participants assigned to the placebo group. PSD502 is a spray that is topically applied to treat premature ejaculation	Mic.
Chang et al. (2011)	Non-clinical general population: Heterosexual pregnant women (*N* = 663)	Taiwanese version of Female Sexual Function Index (FSFI)	Low weight before pregnancy was associated with higher SS, while the interaction between body image and having had an artificial abortion were associated with lower SS during the first trimester of pregnancy. During the third trimester, the interaction between body image and having had infertility problems was associated with higher SS, and the interaction between body image and severity of infertility was associated with lower SS	Mic. Mes.

Chao et al. (2011)	Non-clinical general population: Men (*n* = 200) and women (*n* = 83). Did not report sexual orientation	Taiwanese version of Sexual Satisfaction Scale	High sexual desire was associated with greater SS	Mes.
Cheung et al. (2008)	Non-clinical general population: Heterosexual couples (*N* = 1,124)	1 item	Sexual interest was associated with higher SS and accounted for 27% and 19% of SS in men and women, respectively	Mes.
Clymer et al. (2006)	Non-clinical general population: Men and women (*N* = 200). Did not report sexual orientation	Index of Sexual Satisfaction (ISS)	Ambivalent attachment was associated with lower SS and accounted for 15.3% of SS	Mes.
Cortés-González et al. (2008)	Non-clinical general population: Heterosexual women whose partners had a circumcision (*N* = 19)	Spanish version of Changes on Sexual Functioning Questionnaire (CSFQ)	No significant differences in SS before and after the partner's circumcision	Mic.

Cortés-González et al. (2009)	Non-clinical general population: Heterosexual circumcised men (*N* = 22)	Items of different questionnaires: International Index of Erectile Function (IIEF), Changes in Sexual Functioning Questionnaire (CFSQ), Brief Sexual Function Questionnaire (BSFQ), and Center for Marital and Sexual Health Sexual Functioning Questionnaire (CMASHSFQ)	No significant differences in SS before and after circumcision	Mic.
Daniel & Bridges (2012)	Non-clinical college students: Men (*N* = 157). Sexual orientation: heterosexual and others	Sexual Satisfaction Subscale of the Extended Satisfaction with Life Scale (ESWLS)	The masculine gender role was associated with higher SS and accounted for 12.1% of SS	Mic.

Darling & McKoy-Smith (1993)	General clinical and non-clinical population: Women with a hysterectomy (*n* = 97), and healthy women (*n* = 249). Did not report sexual orientation	Index of Sexual Satisfaction (ISS)	In women with a hysterectomy, better psychological health, family support, and the ability to reframe their problems were associated with higher SS. These variables accounted for 38% of SS In healthy women, better psychological health status and the ability to reframe their problems were associated with high SS. These variables accounted for 13.4% of SS	Mic. Exo.
Davidson & Darling (1988)	Non-clinical general population: Heterosexual women (*N* = 133)	Not reported	No significant differences in SS according to marital status	Mes.
Davidson & Darling (1993)	Non-clinical general population: Heterosexual women (*N* = 671)	Not reported	Women who never or rarely feel guilt derived from masturbation reported significantly greater SS (psychological and physiological) than women who always or often feel guilt	Mic.
Davidson et al. (1995)	Non-clinical general population: Heterosexual women (*N* = 805)	Not reported	No significant differences in SS according to religious practice	Mac.

Davis et al. (2008)	Non-clinical general population: Pre-menopausal women (N = 261). Did not report sexual orientation	Sabbatsberg Sexual Self-Rating Scale	No significant differences in SS between the placebo group and three experimental groups (assigned to three different doses of testosterone transdermal spray)	Mic.
Davison et al. (2008)	Non-clinical general population: Pre-menopausal women (n = 184) and post-menopausal women (n = 165). Did not report sexual orientation	1 item	Women with high SS reported more frequent sexual thoughts, sexual interest and events, and initiation of sexual activity. In addition, pre-menopausal women with high SS reported more frequent sexual thoughts and greater frequency of sexual activity than post-menopausal women with high SS	Mic. Mes.
Davison et al. (2009)	Non-clinical general population: Pre-menopausal women (n = 161) and post-menopausal women (n = 134). Did not report sexual orientation	1 item	Pre-menopausal women who reported high SS also reported significantly greater frequency of sexual activity and greater vitality than women who reported low SS Post-menopausal women who reported high SS also reported significantly higher frequency of sexual activity, low anxiety, more well-being, and vitality than women who reported low SS	Mic. Mes.

DeLamater et al. (2008)	Non-clinical general population: Men (*n* = 2,156) and women (*n* = 1,955). Did not report sexual orientation	2 items	Relationship satisfaction and high frequency of sexual activity were associated with higher SS. These variables accounted for 39% of SS	Mes.
Demirkesen et al. (2008)	Clinical general population: Women treated for urinary incontinence (*N* = 69). Did not report sexual orientation	*Ad hoc* questionnaire	No significant differences in SS between women in the tension-free vaginal tape surgery group and the Burch colposuspension surgery group	Mic.
De Ryck et al. (2012)	Clinical general population: Men who attended HIV treatment centers (*N* = 1,017). Heterosexual, homosexual and bisexual	Visual Analogue Scale	Age, depressive symptoms, anxiety, stress, use of anxiolytics, low support from one's partner, and experiences of HIV-related discrimination were associated with lower SS in both homosexual/bisexual and heterosexual men	Mic. Mes. Exo.
Dinsmore & Wyllie (2009)	Clinical general population: Heterosexual men with premature ejaculation (*N* = 300)	International Index of Erectile Function-5 (IIEF-5)	Participants assigned to the PSD502 group reported significantly higher SS than participants assigned to the placebo group. PSD502 is a spray that is topically applied to treat premature ejaculation	Mic.

Dixon (1985)	Non-clinical general population: Heterosexual men (*n* = 50) and bisexual (*n* = 50)	Not reported	Heterosexual men reported significantly greater SS than gay men	Mic.
Dourado et al. (2010)	Clinical general population: Heterosexual patients with Alzheimer's (*N* = 36) and their spouses	Brazilian Version of Questionnaire on Sexual Experience and Satisfaction	No significant differences in SS were found between men and women. However, participants whose partners had greater severity of disease reported lower SS than those whose partners had lower severity of disease	Mic.
Drosdzol et al. (2007)	General clinical and non-clinical population: Women with polycystic ovary syndrome (*n* = 50) and healthy women (*n* = 40). Did not report sexual orientation	Index of Sexual Satisfaction (ISS)	Women with polycystic ovarian syndrome reported significantly lower SS than healthy women	Mic.
Dundon & Rellini (2010)	Non-clinical general population: Heterosexual and homosexual menopausal women (*N* = 86)	3 items of Female Sexual Function Index (FSFI)	Psychological well-being, dyadic adjustment, and fewer symptoms of menopause were associated with higher SS	Mic. Mes.

Elsenbruch et al. (2003)	General clinical and non-clinical population: Women with polycystic ovary syndrome (*n* = 50) and healthy women (*n* = 50). Did not report sexual orientation	Visual Analog Scale	Women with polycystic ovary syndrome reported significantly lower SS than healthy women	Mic.
Farley & Davis (1980)	Non-clinical college students: Heterosexual couples (*N* = 102)	Marital Sexual Activity and Satisfaction Inventory	Women reported higher SS when their partners had a personality (extraversion-introversion and neuroticism) that was similar to theirs Men reported higher SS when their partners were similar to them in the trait of psychoticism	Mic.
Feldman-Summers et al. (1979)	General clinical and non-clinical population: Women who had been raped (*n* = 14) and women who had not been raped (*n* = 14). Did not report sexual orientation	Current Sexual Behavior Questionnaire and Sexual Satisfaction Questionnaire	Women who had been raped reported significantly lower SS than women who had not been raped	Mic.

Finkelhor et al. (1989)	Non-clinical general population: Men (*n* = 1,145) and women (*n* = 1,485). Did not report sexual orientation	1 item	Sexual abuse was associated with lower SS in women	Mic.
Fuertes (2000)	Non-clinical general population: Heterosexual couples (*N* = 71)	Sexual Interaction Inventory (SII)	Low confidence and the discrepancy between desired and perceived concern on the part of the couple were associated with lower SS in both genders In childless couples, these variables accounted for 31.3% of SS In couples with children, higher SS was reported when the man perceived that his partner was more concerned with what he did to her. This variable accounted for 16.7% of SS	Mes.
Gil (2007)	Non-clinical college students: Heterosexual and homosexual men (*N* = 180)	Sexual Satisfaction Subscale of the Extended Satisfaction with Life Scale (ESWLS)	Well-being, homosexual orientation, and a positive body image were associated with greater SS. These variables accounted for 32% of SS	Mic.

Goff (2010)	General clinical and non-clinical population: Participants attending a university clinic (*n* = 131) and healthy participants (*n* = 33), men and women. Did not report sexual orientation	Pinney Sexual Satisfaction Inventory (PSSI)	No significant differences were found in SS between the clinical and non-clinical sample Differentiation of self was associated with high SS. This variable accounted for 4.1% of SS of the total sample. Spirituality was only significant in predicting SS in women and accounted for 3.7% of SS	Mic. Mac.
Gralla et al. (2008)	Clinical general population: Heterosexual men with erectile dysfunction (*N* = 904)	2 item of International Index of Erectile Function (IIEF)	Men with severe erectile dysfunction reported significantly lower SS than men with less severe erectile dysfunction Older men reported significantly greater SS than young men	Mic. Mes.
Haavio-Mannila & Kontula (1997)	Non-clinical general population: Men (*n* = 2,250) and women (*n* = 2,188). Did not report sexual orientation	Not reported	In men, orgasm, love, importance attached to sex, frequency and variety of sex, sexual assertiveness, and sexual material had positive direct effects on SS In women, orgasm, sexual assertiveness, variety of sexual techniques, age, and frequency of sex had positive direct effects on SS	Mic. Mes.

Habke et al. (1999)	Non-clinical general population: Heterosexual couples (*N* = 74)	Pinney Sexual Satisfaction Inventory (PSSI)	In men, marital adjustment was associated with higher SS and accounted for 18% of SS In women, depression, and other-oriented perfectionism were associated with lower SS, and marital adjustment was associated with higher SS. These variables accounted for 52% of SS	Mic. Mes.
Hally & Pollack (1993)	Non-clinical college students: Heterosexual men (*n* = 99) and women (*n* = 99)	Index of Sexual Satisfaction (ISS)	High self-esteem, sexual past experience, and the interaction of both variables were associated with higher SS. These variables accounted for 18% of SS	Mic.
Haning et al. (2007)	Non-clinical college students: Heterosexual men (*n* = 179) and women (*n* = 417)	Sexual Relationship Index (SRI)	In men, sexual intimacy and orgasm were associated with greater SS, while conflict was associated with lower SS. These variables accounted for 45% of SS In women, sexual intimacy, orgasm, and intimacy in general were associated with higher SS. These variables accounted for 41.1% of SS	Mes.

Harden et al. (2012)	Clinical general population: Participants whose partners had prostate cancer (*N* = 121), men and women. Heterosexual and homosexual	Sexual Satisfaction Scale (SSS)	High socioeconomic status was associated with higher SS and accounted for 19% of SS. Symptoms of discomfort of the couple related to sexual functioning and hormone therapy were associated with lower SS. These variables accounted for 39% of SS	Mic Mes. Exo.
Hatfield et al. (1982)	Non-clinical general population: Heterosexual couples (*N* = 53)	5 items	Both husbands and wives who reported more equity in their relationship reported significantly greater SS	Mes.
Heiman et al. (2011)	Non-clinical general population: Heterosexual couples (*N* = 1,009)	1 item	In men, good health, importance of partner orgasm, frequency of kissing, hugging, fondling, sexual intercourse, sexual functioning, and being from Japan were associated with higher SS, while greater number of sexual partners was associated with lower SS. These variables accounted for 29% of SS In women, length of the relationship, frequency of kissing, hugging, fondling, sexual activity, and sexual functioning, and being from Japan or Brazil, were associated with greater SS. These variables accounted for 25.8% of SS	Mic. Mes.

Henderson et al. (2009)	Non-clinical general population: Heterosexual (*n* = 139) and lesbian and bisexual women (*n* = 114)	Global Measure of Sexual Satisfaction (GMSEX)	Depressive symptoms were associated with lower SS, while relationship satisfaction, sexual functioning, and perceived social support were associated with higher SS in both groups. Internalized homophobia in lesbian and bisexual women was associated with lower SS. These variables accounted for 65% of the variance of SS of heterosexual women and 54% of SS of lesbian and/or bisexual women	Mic. Mes. Exo.
Herbenick et al. (2011)	Non-clinical general population: Women (*N* = 2,453). Heterosexual and other	1 item	Women who used a lubricant during intercourse reported significantly greater SS than women who did not use a lubricant	Mes.

Higgins et al. (2011)	Non-clinical college students: Heterosexual men (*n* = 817) and women (*n* = 1,351)	2 items	In men, having an exclusive relationship with a partner, self-concept, frequency of intercourse, and self-esteem were associated with higher SS. These variables accounted for 34% of the physical SS and 32% psychological SS In women, having an exclusive relationship with a partner, self-concept, frequency of intercourse and orgasm, and self-esteem were associated with greater SS. These variables accounted for 31% of physical SS and 32% of psychological SS	Mic. Mes.

Higgins et al. (2010)	Non-clinical college students: Heterosexual men (*n* = 747) and women (*n* = 1,239)	2 items	In black women, older age at first intercourse, low anxiety, and high psychological SS were associated with higher physical SS. These variables accounted for 50% of physical SS. In white women, older age at first intercourse, low guilt, low anxiety, high psychological SS, and low religiosity were associated with higher physical SS, while having had sex for the first time with a casual partner was associated with lower SS. All these variables accounted for 38% of physical SS. For black males, older age at first intercourse, sex with a casual partner, low guilt, high psychological SS, and not using a condom were associated with greater SS. These variables accounted for 42% of physical SS. In white males, low anxiety, high psychological SS, and low religiosity were associated with higher SS. These variables explained 26% of the variance of physical SS In black women and white men, younger age at first intercourse was associated with higher psychological SS. Committed love relationship was associated with greater SS	Mic. Mes. Mac.

Hofmeyr & Greeff (2002)	Non-clinical general population: Heterosexual men with vasectomy (*n* = 33) and men without vasectomy (*n* = 31)	Index of Sexual Satisfaction (ISS)	No significant differences in SS before and after vasectomy No significant differences in SS between men with and without vasectomy	Mic.
Holt & Lyness (2007)	Non-clinical college students: Men (*n* = 44) and women (*n* =130). Did not report sexual orientation	Pinney Sexual Satisfaction Inventory (PSSI)	Body image and reflected appraisal accounted for 15% of SS	Mic.
Hurlbert et al. (1993)	Non-clinical general population: Heterosexual women (*N* = 98)	Index of Sexual Satisfaction (ISS)	Intimacy, sexual assertiveness, erotophilia, excitation, desire, frequency of intercourse, and orgasm consistency were associated with greater SS. These variables accounted for 58.9% of SS	Mic. Mes.
Hurlbert & Whittaker (1991)	Non-clinical general population: Heterosexual women (*N* = 82)	Index of Sexual Satisfaction (ISS)	Women who reached orgasm with masturbation reported significantly greater SS than women who did not experience orgasm through masturbation	Mes.
Impett & Tolman (2006)	Non-clinical teenage heterosexual girls (*N* = 70)	4 items	Sexual motivation and sexual self-concept were associated with higher SS and accounted for 53% of SS	Mic. Mes.

Ji & Norling (2004)	Non-clinical general population: Heterosexual men (*n* = 447) and women (*n* = 298)	1 item	Younger women reported significantly greater SS than older women Being male was associated with higher SS A good relationship with children and family and good socioeconomic status were associated with higher SS. These variables accounted for 35.7% of SS. Cooking, family responsibility and family relations were associated with lower SS and accounted for 35.5% of SS	Mic. Exo.
Jodoin et al. (2008)	Clinical general population: Heterosexual male partners of women with provoked vestibulodynia (*N* = 38)	French version of Global Measure of Sexual Satisfaction (GMSEX)	Global and stable attributions were associated with lower SS	Mic.

Kazemi et al. (2010)	General clinical and non-clinical population: Menopausal women with osteoporosis (*n* = 21) and with osteopenia (*n* = 32); pre-menopausal women with osteoporosis (*n* = 37) and with osteopenia (*n* = 16); and menopausal women (*n* = 53) and pre-menopausal women (*n* = 53) with normal bone density. Did not report sexual orientation	Larson's Sexual Satisfaction Questionnaire	Menopausal women reported significantly lower SS than pre-menopausal women Women with osteoporosis reported significantly lower SS than women with osteopenia and healthy women. In addition, women with osteopenia reported significantly lower SS than healthy women	Mic.
Kedde & Berlo (2006)	Clinical general population: Men (*n* = 95) and women (*n* = 65) with physical disabilities. Heterosexual, homosexual and bisexual	3 items of Global Measure of Sexual Satisfaction (GMSEX)	In men, care dependency and later age of onset of disability were associated with lower SS, and having a partner was associated with higher SS. These variables accounted for 21% of SS In women, having a partner was associated with higher SS and accounted 37% of SS	Mic. Mes.

Kigozi et al. (2009)	Non-clinical general population: Heterosexual women with circumcised partners (*N* = 455)	Not reported	No significant differences in SS in women before and after circumcision of their partner	Mic.
Kigozi et al. (2008)	Non-clinical general population: Men who received immediate circumcision (*n* = 2,210) and men who received circumcision at 24 months (*n* = 2,246). Did not report sexual orientation	Some items derived from International Index of Erectile Function (IIEF)	No significant differences in SS in participants assigned to immediate circumcision Participants assigned to circumcision at 24 months reported significantly greater SS at two years	Mic.
Kimlicka et al. (1983)	Non-clinical college students: Women (*N* = 204). Did not report sexual orientation	8 items	Women with a masculine role reported significantly greater SS than women with androgynous, feminine, and undifferentiated roles	Mic.
King et al. (2011)	Non-clinical general population: Men and women (*N* = 3,957). Did not report sexual orientation	*Ad hoc* questionnaire	In men and women, having a partner, erection hardness, good family relationships, parenthood, good general physical health, and financial well-being were associated with higher SS	Mic. Mes. Exo.

Kirkpatrick (1980)	Non-clinical general population: Heterosexual couples (*N* = 199)	Sexual Interaction Inventory (SII)	Feminism of women was associated with higher SS, and feminism of men and feminism differences with one's partner were associated with lower SS. These variables accounted for 5.14% of SS	Mic.
Kisler & Christopher (2008)	Non-clinical college students: Heterosexual men (*n* = 133) and women (*n* = 366)	Global Measure of Sexual Satisfaction (GMSEX)	The following components of the Interpersonal Exchange Model of Sexual Satisfaction (IEMSS): balance between sexual rewards and costs, comparative level of sexual costs, equality of sexual rewards, and equality of sexual costs, were associated with greater SS	Mes.
Klein & Houlihan (2010)	Clinical general population: Heterosexual and homosexual men (*n* = 13) and women (*n* = 19) with sexsomnia	Global Measure of Sexual Satisfaction (GMSEX)	Participants with sexsomnia reported significantly lower SS than the sample of Byers and MacNeil (2006)	Mic.
Koç & Saglam (2011)	Clinical general population: Hemodialysis patients (*N* = 131), men and women. Did not report sexual orientation	Turka version of Golombok Rust Inventory of Sexual Satisfaction (GRISS)	Older age, lower educational level, living in villages, and poor health status were associated with lower SS	Mic.

Krieger et al. (2008)	Non-clinical general population: Heterosexual men who received immediate circumcision (*n* = 1,313) and men who received circumcision at 24 months (*n* = 1,371)	Not reported	No significant differences in SS in the circumcised group before and after circumcision, or between the circumcised group and the group without circumcision	Mic.
Kumar & Makwana (1991)	Non-clinical general population: Heterosexual couples (*N* = 80)	Sexuality Scale	Couples who had a relationship of less than 10 years' duration reported significantly higher SS than couples in a relationship for over 10 years	Mes.
La France (2010)	Non-clinical college students: Men (*n* = 162) and women (*n* = 139). Heterosexual, homosexual and bisexual	5 items	General sexual knowledge, self-specific sexual knowledge, sexual rewards relative to costs, and comparison level for sexual rewards relative to comparison level for sexual costs were associated with higher SS. These variables accounted for 42% of SS	Mic. Mes.
Lam et al. (2005)	Clinical general population: Partners of bipolar patients, heterosexual men (*n* = 20) and women (*n* = 17)	Golombok Rust Inventory of Sexual Satisfaction (GRISS)	Participants reported significantly lower SS during their partners' episodes of mania and depression than when their partners had no such episodes	Mic.

Lara et al. (2012)	Non-clinical general population: Menopausal women (*N* = 32). Did not report sexual orientation	Sexual Quotient-Female Version (SQ-F)	No significant differences in SS before and after physical exercise and pelvic floor muscle training	Mic.
Larson et al. (1998)	Non-clinical general population: Heterosexual couples (*N* = 70)	Index of Sexual Satisfaction (ISS)	In men, self-esteem of the partner, open communication with the partner, and the stability of the relationship were associated with higher SS. These variables accounted for 37% of SS In women, self-esteem, empathic communication with the partner, and self open communication were associated with greater SS. These variables accounted for 45% of SS	Mic. Mes.
Lau et al. (2005)	Non-clinical general population: Heterosexual men (*n* = 1,281) and women (*n* = 2,130)	Not reported	In men, low levels of physical exercise and work stress were associated with lower SS, while being married or living with a partner were associated with higher SS In women, family and financial stress was associated with lower SS. In both genders, a bad relationship was associated with lower SS	Mic. Mes. Exo.

Lau et al. (2006)	Non-clinical general population: Heterosexual couples (*N* = 298)	1 item	Bad relationship, not trusting one's spouse, and husband's only sexual initiative were associated with lower SS in husbands and wives. In addition, when the woman had the power of decision and when she perceived that the husband had strong control over the relationship, the SS of women decreased	Mes.
Lawrance & Byers (1995)	Non-clinical general population: Heterosexual men (*n* = 53) and women (*n* = 90)	Global Measure of Sexual Satisfaction (GMSEX)	Relationship satisfaction and the following components of the Interpersonal Exchange Model of Sexual Satisfaction: rewards-costs, relative rewards-costs, and equality benefits, were associated with high SS. These variables accounted for 79% of SS	Mes.
Lee et al. (2010)	Non-clinical general population: Heterosexual pregnant women (*N* = 215)	Chinese version of the Sexual Satisfaction Scale to assess recent SS 7 items of Sexual Satisfaction Scale to assess overall SS	Women reported significantly lower overall SS during pregnancy than before pregnancy No significant differences between recent SS and overall SS during pregnancy	Mic.

Lee et al. (2001)	Clinical general population: Heterosexual infertile couples (*N* = 138)	Sexual Satisfaction Questionnaire (SSQ)	Wives reported significantly lower SS than their husbands When the diagnosis of infertility pointed to the male, the female, or both, husbands and wives reported lower SS No significant differences in SS between husbands and wives when the diagnosis of infertility was unexplained	Mic. Mes.
Leonard et al. (2008)	Clinical general population: Heterosexual and homosexual women with a history of childhood and/or adolescent sexual abuse (*N* = 22)	Index of Sexual Satisfaction (ISS)	Relationship satisfaction and experiential avoidance accounted for 74.7% of SS	Mic. Mes.
Linton (1990)	Clinical general population: Men with spinal cord injuries (*N* = 118). Did not report sexual orientation	*Ad hoc* questionnaire	Locus of control associated with sexuality was associated with higher SS and accounted for 10.4% of SS	Mic.

Lykins et al. (2012)	Non-clinical general population: Heterosexual couples (N = 35)	Global Measure of Sexual Satisfaction (GMSEX)	In men, low anxiety and cheerful mood similar to that of the partner were associated with higher SS, while propensity for arousal was associated with lower SS. These variables accounted for 55% of SS in men In women, propensity for arousal was associated with lower SS and cheerful mood was associated with higher SS. These variables accounted for 46% of SS	Mic. Mes.
MacNeil & Byers (1997)	Non-clinical general population: Heterosexual men (n = 34) and women (n = 53)	Global Measure of Sexual Satisfaction (GMSEX)	Sexual concerns were associated with lower SS. This variable accounted for 22% of SS General communication and sexual communication were associated with greater SS. These variables accounted for 25% of SS	Mes.

MacNeil & Byers (2005)	Non-clinical college students: Heterosexual couples (N = 74)	Global Measure of Sexual Satisfaction (GMSEX)	In women, relationship satisfaction was a mediator between self-disclosure and SS. That is, sexual and non-sexual self-disclosure were associated with greater satisfaction with the relationship, which led to high SS. In men, sexual self-disclosure was associated with greater satisfaction with the relationship, which in turn led to high SS In women, sexual self-disclosure was associated with understanding the rewards of the couple and the rewards and costs, and in turn was associated with high SS. In men, sexual self-disclosure and understanding the rewards and costs were associated with understanding the rewards of women and in turn higher SS	Mes.

MacNeil & Byers (2009)	Non-clinical general population: Heterosexual couples (*N* = 104)	Global Measure of Sexual Satisfaction (GMSEX)	In women, sexual self-disclosure was associated with understanding the rewards of the couple. In turn, this was associated with the balance of rewards and costs of women, which led to higher SS in women. A similar result was obtained in men. In addition, sexual self-disclosure was associated with increased SS in men and women In women, relationship satisfaction was a mediator between self-disclosure and SS. In men, relationship satisfaction was also a mediator between self-disclosure and the woman's sexual disclosure and their SS	Mes.
Marx et al. (2010)	Non-clinical general population: Heterosexual men (*n* = 127) and women (*n* = 95)	11 items	In men, relationship satisfaction, sexual self-confidence, and orgasm were associated with higher SS. These variables accounted for 72% of SS In women, self-confidence and sexual orgasm were associated with greater SS. These variables accounted for 68% of SS	Mic. Mes.

Massod et al. (2005)	Non-clinical general population: Circumcised men (*N* = 84). Did not report sexual orientation	International Index of Erectile Function-5 (IIEF-5)	No significant differences in SS before and after circumcision	Mic.
McCabe & McDonald (2007)	General clinical and non-clinical population: Heterosexual men (*n* = 17) and women (*n* = 28) with multiple sclerosis and their partners; and heterosexual healthy men (*n* = 19) and women (*n* = 22) and their partners	6 items	No significant differences in SS between participants and their partners or between participants with multiple sclerosis and healthy participants	Mic.

McCabe & Taleporos (2003)	General clinical and non-clinical population: Men and women with physical disabilities (*n* = 748), and healthy men and women (*n* = 448). Heterosexual, homosexual and bisexual	1 item	Participants with severe physical disabilities reported significantly lower SS than participants with mild physical disabilities or without disabilities In men, oral sex and fondling were associated with higher SS, while watching pornography was associated with lower SS. These variables accounted for 35% of SS In women, frequency of kissing was associated with higher SS and accounted for 34% of SS	Mic. Mes.
McCall-Hosenfeld, Freund et al. (2008)	Non-clinical general population: Menopausal women (*N* = 46,525). Heterosexual, homosexual and bisexual	1 item	Women who reported being satisfied with their sex lives, compared to those who were not satisfied, were younger, white, were married or had a partner, and had high income. Better physical health, increased physical activity, lower symptoms of depression, not smoking, and a normal body mass index were associated with higher SS	Mic. Mes. Exo.

McCall-Hosenfeld, Jaramillo et al. (2008)	Non-clinical general population: Menopausal women (*N* = 46,525). Heterosexual, homosexual and bisexual	1 item	Women who reported being satisfied with their sex lives, compared to those who were not satisfied, reported better physical functioning, few limitations due to physical health problems, less bodily pain, better overall health, greater vitality, better social functioning, lower role limitations due to emotional health problems, and better mental health. Women who reported taking oral contraceptives or had a history of hysterectomy reported less SS. Parity was also associated with low SS. Selective serotonin reuptake inhibitor use was associated with lower SS; more exercise, not smoking, and normal body mass index were associated with higher SS	Mic.
McCall-Hosenfeld et al. (2009)	Non-clinical general population: Women veterans (*N* = 3,181). Did not report sexual orientation	1 item	Good state of mental and physical health, absence of gynecological illness, and having a partner were associated with higher SS. These variables mediated the negative effect of sexual assault in the military. Sexual assault in the military was associated with lower SS	Mic. Mes.

McCann & Biaggio (1989)	Non-clinical general population: Heterosexual couples (N = 48)	Sexual Interaction Inventory (SII)	Selfishness was associated with increased SS, while age, self-actualization, and social desirability were associated with lower SS. These variables accounted for 27.2% of SS	Mic.
McClelland (2011)	Non-clinical general population: Men (n = 19), women (n = 21), and transsexual (n = 1). Heterosexual, homosexual, bisexual, and others	Modified version of Cantril's Ladder	No significant differences in SS, or effect of gender or sexual orientation	Mic.
McNulty & Fisher (2008)	Non-clinical general population: Heterosexual couples (N = 59)	Index of Sexual Satisfaction (ISS)	In husbands, high sexual satisfaction (assessed 6 months before) and higher frequency of sexual activity were associated with higher SS In wives, high sexual satisfaction (assessed 6 months before) and sexual satisfaction expectancies were associated with higher SS	Mes.
Meltzer & McNulty (2010)	Non-clinical general population: Heterosexual couples (N = 53)	Index of Sexual Satisfaction (ISS)	In both husbands and wives, sexual frequency was associated with higher SS.	Mes.

Ménard & Offman (2009)	Non-clinical general population: Heterosexual men (*n* = 25) and women (*n* = 46)	Index of Sexual Satisfaction (ISS)	Sexual self-esteem was associated with higher sexual assertiveness and in turn with higher SS	Mic. Mes.
Menard et al. (2011)	Clinical general population: Men with erectile dysfunction and penile prosthesis implantation after post-radical prostatectomy (*n* = 90) and implants for vasculogenic erectile dysfunction (*n* = 131). Did not report sexual orientation	1 item	No significant differences in SS between the post-radical prostatectomy group and the implants for vasculogenic erectile dysfunction group	Mic.
Mendes et al. (2008)	General clinical and non-clinical population: Men with spinal cord injury (*n* = 40), and healthy men (*n* = 50). Did not report sexual orientation	1 item	Participants with spinal cord injury reported significantly lower SS than healthy participants Participants reported significantly lower SS after spinal cord injury than before the injury	Mic.

Mitchell & Boster (1998)	Non-clinical college students: Men (*n* = 120) and women (*n* = 170). Did not report sexual orientation	Index of Sexual Satisfaction (ISS)	Satisfactory conflict resolution was associated with higher relationship satisfaction, which in turn led to higher SS	Mes.
Moret et al. (1998)	Non-clinical college students: Men (*n* = 72) and women (*n* = 87). Did not report sexual orientation	Index of Sexual Satisfaction (ISS)	Women reported significantly greater SS than men	Mic.
Mosack et al. (2011)	Clinical general population: Men (*n* = 124) and women (*n* = 45) with heart failure. Did not report sexual orientation	Sexual Satisfaction Subscale of the Multidimensional Sexual Self-Concept Questionnaire (MSSCQ)	Participants who were not depressed and were not taking antidepressant drugs reported significantly greater SS than those who were depressed and/or taking drugs. Depression accounted for 8% of SS	Mic.
Mulhall et al. (2004)	Clinical general population: Men with penile prosthesis (*N* = 32). Did not report sexual orientation	4 items of International Index of Erectile Function (IIEF)	Participants reported significantly greater SS when taking sildenafil	Mic.
Müller et al. (1999)	Clinical general population: Heterosexual men with reduced fertility (*N* = 68)	2 items	The age difference of couples and intercourse frequency were associated with high SS. These variables accounted for 20% of SS	Mic. Mes.

Nelson et al. (2007)	Clinical general population: Men with prostate cancer (*N* = 352). Did not report sexual orientation	1 item	Anxiety and depression were associated with lower SS, while erectile function and relationship closeness were associated with higher SS. These variables accounted for 38% of SS	Mic. Mes.
Neto (2012)	Non-clinical colleague students: Men (*n* = 182) and women (*n* = 246). Did not report sexual orientation	Satisfaction With Sex Life Scale (SWSLS)	No significant differences in SS between men and women No significant differences in SS depending on the length of the relationship Believers and regular attendees reported significantly greater SS than non-believers/non-attendees	Mic. Mes. Mac.
Nowosielski et al. (2010)	General clinical and non-clinical population: Women with premenstrual symptoms who met the diagnostic criteria for PMS (*n* = 749) and without a diagnostic for PMS (*n* = 791). Did not report sexual orientation	Not reported	Women with a diagnosis of PMS reported significantly lower SS than women without a diagnosis of PMS High level of education and more frequent intercourse were associated with high SS. PMS was associated with low SS	Mic. Mes.

O'Farrell et al. (1991)	General clinical and non-clinical population: Heterosexual couples in which the husbands were alcoholic (*n* = 26), couples with poor marital relationship (*n* = 26), and couples without problems (*n* = 26)	4 items derived from Adjustment Test Marital Areas of Change Questionnaire (ACQ)	Couples whose husbands were alcoholics and couples with poor marital relationship reported significantly lower SS than non-clinical couples	Mic. Mes.
O'Farrell et al. (1997)	General clinical and non-clinical population: Heterosexual couples in which the husbands were alcoholic (*n* = 26), couples with poor marital relationship (*n* = 26), and couples without problems (*n* = 26)	Sexual Adjustment Questionnaire (SAQ)	Couples whose husbands were alcoholic and couples with poor marital relationship reported significantly lower SS than non-clinical couples	Mic. Mes.

Ojanlatva et al. (2003a)	Non-clinical general population: Men and women (*N* = 21,101). Heterosexual, homosexual and bisexual	1 item	Women reported significantly greater SS than men Increasing age and higher educational level were associated with lower SS Participants living in northern Finland reported significantly greater SS than the rest. In addition, participants who lived in the countryside reported significantly greater SS. Being married was associated with higher SS	Mic. Mes.
Ojanlatva et al. (2003b)	Non-clinical general population: Men and women (*N* = 21,101). Heterosexual, homosexual and bisexual	1 item	In both men and women, a close relationship with parents or parental substitutes during childhood was associated with high SS In men, the divorce of their parents during childhood was associated with high SS in adulthood	Exo.
O'Leary & Arias (1983)	Clinical general population: Heterosexual couples attending marriage counseling (*N* = 44)	Sexual Inventory	Marriage counseling including information about sexuality was associated with increased SS in couples	Mes.

Onder et al. (2003)	Clinical general population: Women with disabilities (*N* = 980). Did not report sexual orientation	1 item	In women who lived with a partner, age, being white, and high levels of physical performance were associated with higher SS In women who were not living with a partner, being white, low alcohol consumption, and lower levels of depression were associated with higher SS	Mic.
Orlando & Koss (1983)	Clinical and non-clinical college students: Women who had been raped and women who had not been raped (*N* = 99). Did not report sexual orientation	Sexual Satisfaction Questionnaire	Women who had been raped and considered themselves victims reported significantly lower SS than women who had not been raped	Mic.

Parish et al. (2007)	Non-clinical general population: Men (*n* = 1,217) and women (*n* = 1,194). Did not report sexual orientation	5 items	In men, orgasm, variety of practices, orgasm and attractiveness of partner, and knowledge of orgasm were associated with greater SS. Having been beaten/hit by partner, partner infidelity, permissive sex values, and own education were associated with lower SS. These variables accounted for 39% of SS In women, orgasm, variety of practices, affection from the partner, and man's help in housework were associated with high SS. Being continuously married, having been abused, permissive sex values, own education, own age, and fear of pregnancy were associated with low SS. These variables accounted for 67% of SS	Mic. Mes.
Pascoal et al. (2012)	Clinical general population: Heterosexual men (*n* = 97) and women (*n* = 96) with sexual arousal problems	Global Measure of Sexual Satisfaction (GMSEX)	In men with erectile dysfunction, relational intimacy was associated with higher SS. This variable accounted for 44% of SS In women, sexual arousal problems were associated with low SS, and intimacy was associated with high SS. These variables accounted for 48% of SS	Mes.

Peck et al. (2005)	Non-clinical college students: Men (*n* = 82) and women (*n* = 102). Did not report sexual orientation	Global Measure of Sexual Satisfaction (GMSEX)	Relationship satisfaction, mutual communal behaviors, and the following components of the Interpersonal Exchange Model of Sexual Satisfaction: rewards minus costs, comparison level for costs minus comparison level for rewards, and equality of rewards, were associated with higher SS. These variables accounted for 41% of SS in both genders	Mes.
Pedersen & Blekesaune (2003)	Non-clinical general population: Men and women (*N* = 2,101). Did not report sexual orientation	*Ad hoc* questionnaire	In men, age predicted lower SS, while having a partner, social support, kissing/hugging, intercourse, and having more than 6 sexual partners were associated with greater SS In women, having a partner, social support, sex role femininity, intercourse, and lifetime sex partners predicted greater SS, while depression/anxiety and extra-dyadic relationship were associated with lower SS	Mic. Mes. Exo.

Peitl et al. (2009)	General clinical and non-clinical population: Patients with schizophrenia (*n* = 100), patients with depression (*n* = 100), and healthy participants (*n* = 100), men and women. Did not report sexual orientation	Bezinović's Questionnaire	Participants with schizophrenia and who professed the Roman Catholic religion reported significantly greater SS than atheist and Eastern Orthodox participants No significant differences in SS between patients with depression and healthy participants in terms of the religion they professed	Mac.
Peleg-Sagy & Shahar (2012)	Non-clinical college students: Women (*N* = 60). Did not report sexual orientation	Hebrew version of Pinney Sexual Satisfaction Inventory (PSSI)	Depressive symptoms were associated with lower SS	Mic.
Penhollow et al. (2009)	Non-clinical general population: Heterosexual men (*n* = 127) and women (*n* = 95)	11 items	In men, relationship satisfaction, sexual self-confidence, and orgasm were associated with higher SS. These variables accounted for 72% of SS In women, self-confidence and orgasm were associated with greater SS. These variables accounted for 68% of SS	Mic. Mes.

Pepe & Byerne (1991)	Clinical general population: Women treated for infertility (*N* = 40). Did not report sexual orientation	Index of Sexual Satisfaction (ISS)	Women reported significantly lower SS during infertility treatment and two years after treatment than before treatment	Mes.
Peter & Valkenburg (2009)	Non-clinical teenagers: Boys and girls (*N* = 1,052). Did not report sexual orientation	2 items	Greater exposure to sexually explicit Internet material was associated with lower SS	Mic.
Philippsohn & Hartmann (2009)	Non-clinical general population: Women (*N* = 102). Did not report sexual orientation	1 item	Satisfaction and frequency of intercourse were associated with higher SS. These variables accounted for 70% of SS	Mes.
Pinney et al. (1987)	Non-clinical college students: Heterosexual women (*N* = 275)	Pinney Sexual Satisfaction Inventory (PSSI)	Commitment to the relationship, consistency of orgasm, frequency of intercourse, and contraceptive efficacy were associated with high SS. These variables accounted for 40.4% of SS	Mes.

Pujols et al. (2010)	Non-clinical general population: Heterosexual women (*N* = 154)	Sexual Satisfaction Scale In women (SSS-W)	High body esteem, low frequency of distracting thoughts of body image during sexual activity, and sexual functioning were associated with higher SS. These variables accounted for 42.6% of SS	Mic. Mes.
Purdon & Holdaway (2006)	Non-clinical college students: Men (*n* = 47) and women (*n* = 50). Did not report sexual orientation	Global Measure of Sexual Satisfaction (GMSEX)	No significant differences in SS between men and women Participants who were in a relationship reported greater SS than those who were not in a relationship	Mic. Mes.
Rahmani et al. (2009)	Non-clinical general population: Heterosexual men (*n* = 143) and women (*n* = 149)	Not reported	Relationship satisfaction was associated with higher SS, while length of the relationship was associated with lower SS	Mes.
Raina, Agarwal et al. (2005)	Clinical general population: Men with erectile dysfunction (*N* = 31). Did not report sexual orientation	International Index of Erectile Function-5 (IIEF-5)	Participants reported significantly higher SS due to using a vacuum constriction device and sildenafil citrate	Mic.
Raina, Nandipati et al. (2005)	Clinical general population: Men with erectile dysfunction (*N* = 23). Did not report sexual orientation	International Index of Erectile Function-5 (IIEF-5)	Participants reported significantly higher SS due to the addition of MUSE to sildenafil	Mic.

Rainer & Smith (2012)	Non-clinical general population: Men and women (*N* = 12,402). Did not report sexual orientation	1 item	Acquisition of information, age, and number of children were associated with greater SS, while length of the relationship, being male, and cohabiting with a partner were associated with lower SS. These variables accounted for 6% of SS	Mic. Mes. Exo.
Rehman et al. (2011)	Non-clinical general population: Heterosexual couples (*N* = 91)	Golombok Rust Inventory of Sexual Satisfaction (GRISS)	Participants who reported greater self-disclosure reported higher SS (actor effect). In addition, greater self-disclosure of women was associated with higher SS in men (partner effect) Men reported significantly lower SS than women	Mic. Mes.
Renaud et al. (1996)	Non-clinical general population: Heterosexual men (*n* = 170) and women (*n* = 191)	Global Measure of Sexual Satisfaction (GMSEX)	Women reported significantly greater SS than men	Mic.
Rew (1990)	Non-clinical general population: Men (*N* = 41). Did not report sexual orientation	Index of Sexual Satisfaction (ISS)	High level of education was associated with greater SS and accounted for 13% of SS	Mic.

Rosen et al. (2012)	Clinical general population: Heterosexual women with vestibulodynia (*N* = 121)	Global Measure of Sexual Satisfaction (GMSEX)	Trait anxiety was associated with lower SS, while solicitous partner response and sexual functioning were associated with higher SS. These variables accounted for 43% of SS	Mic. Mes.
Rosen et al. (2010)	Clinical general population: Heterosexual women with provoked vestibulodynia (*N* = 191)	Global Measure of Sexual Satisfaction (GMSEX)	Sexual functioning and solicitous partner response were associated with greater SS, while the partner's negative response was associated with lower SS. These variables accounted for 30% of SS	Mes.
Rosen et al. (2005)	Clinical general population: Heterosexual men with erectile dysfunction (*N* = 2,102)	International Index of Erectile Function (IIEF)	Men assigned to the tadalafil group reported significantly greater SS than men in the placebo group	Mic.
Rosenzweig & Dailey (1989)	Non-clinical general population: Heterosexual men (*n* = 148) and women (*n* = 151)	Index of Sexual Satisfaction (ISS)	Women with a feminine or androgenic role reported significantly greater SS than women with an undifferentiated role Men with an androgenic or feminine role reported significantly greater SS than men with an undifferentiated role	Mic.

Rosenzweig & Lebow (1992)	Non-clinical general population: Lesbians (*N* = 111)	Index of Sexual Satisfaction (ISS)	Women who perceived their sex role as feminine or androgenic reported significantly greater SS than those who perceived their sex role as masculine or undifferentiated	Mic.
Rubin & Campbell (2012)	Non-clinical general population: Heterosexual couples (*N* = 67)	4 items	Daily intimacy in both partners was associated with higher SS	Mes.
Sabatini & Cagiano (2006)	Non-clinical general population: Women who used hormonal contraceptives (*N* = 280). Did not report sexual orientation	Not reported	Women in the group that used a vaginal ring reported significantly greater SS than those the other groups (levonorgestrel and gestodene)	Mes.
Safarinejad et al. (2009)	Non-clinical general population: Heterosexual pregnant women and their husbands (*N* = 836)	1 item	Women in the operative vaginal delivery group reported significantly lower SS than those in other groups Women in the planned cesarean section group reported significantly greater SS, followed by women in the spontaneous vaginal delivery group	Mic.

Sánchez et al. (2011)	Non-clinical general population: Heterosexual women (*n* = 300) and lesbians (*n* = 159)	2 items	Relationship satisfaction was associated with higher intimacy sex motives, less approval sex motives, more sexual autonomy, and in turn higher SS. Contingency of the relationship was associated with higher intimacy sex motives and with higher approval sex motives, which in turn were associated with increased autonomy and higher SS. Intimacy sex motives and sexual autonomy were associated with higher SS, while approval sex motives was associated with less SS. These variables accounted for 54% of SS	Mic. Mes.
Santos-Iglesias et al. (2009)	Non-clinical general population: Men (*n* = 296) and women (*n* = 350). Did not report sexual orientation	Spanish version of Index of Sexual Satisfaction (ISS)	No significant differences in SS between men and women	Mic.
Schiavi et al. (1994)	Non-clinical general population: Heterosexual men (*N* = 77)	Subscale of Derogatis Sexual Function Inventory (DSFI)	Erectile dysfunction was associated with lower SS, while sexual information and marital adjustment were associated with higher SS. These variables accounted for 45.6% of SS	Mic. Mes.

Schick et al. (2010)	Non-clinical college students: Heterosexual and homosexual women (*N* = 188)	Sexual Satisfaction Subscale of the Multidimensional Sexual Self-Concept Questionnaire (MSSCQ)	Dissatisfaction with genital appearance was associated with greater self-awareness of the genitals during intimate situations (indirect effects on SS), and in turn was associated with lower sexual self-esteem. Low sexual self-esteem was associated with lower SS	Mic.
Scott et al. (2012)	Non-clinical general population: Heterosexual couples (*N* = 535)	Marital Satisfaction Inventory-Revised (MSI-R)	Depressive symptoms were associated with communication problems, decreasing SS in both genders In women, better health status was associated with greater SS	Mic. Mes.
Şenol et al. (2008)	Non-clinical general population: Circumcised men (*N* = 43). Did not report sexual orientation	Brief Male Sexual Function Inventory (BMSFI)	No significant differences in SS before and after circumcision	Mic.
Sierra et al. (2002)	Non-clinical general population: Spanish women (*n* = 180) and men (*n* = 45), and Chilean women (*n* = 190) and men (*n* = 45). Did not report sexual orientation	Sexual Interaction Inventory (SII)	No significant differences in SS or according to gender or country of residence	Mic.

Smith & Horne (2008)	Non-clinical general population: Lesbian/queer or bisexual (*N* = 318)	Sexual Satisfaction Subscale of the Extended Satisfaction with Life Scale (ESWLS)	Living with a partner, spiritual freedom, and connectedness were associated with high SS	Mes. Mac.
Smith et al. (2012)	Non-clinical general population: Heterosexual men (*n* = 3,043) and women (*n* = 2,884)	3 items	In men, lack of interest in sex, reaching orgasm too fast, not finding sex pleasurable, anxiety about the ability to perform sexually, and erection problems were associated with lower SS In women, lack of interest in sex, inability to achieve orgasm or taking too long to reach orgasm, pain during intercourse, not finding sex pleasurable, anxiety about the ability to perform sexually, vaginal dryness, and concern about attractiveness of the body during intercourse were associated with lower SS	Mic. Mes.

Song et al. (1995)	Non-clinical general population: Heterosexual couples (*N* = 100)	2 items	Cultural conflicts about sexual practices were associated with lower SS, and cohesion was associated with higher SS. These variables accounted for 32.5% of SS of husbands Cultural conflicts about sexual practices and age were associated with lower SS, and cohesion, having a husband in the US military and years lived in US the since marriage were associated with higher SS. These variables accounted for 34.7% of SS in wives	Mic. Mes. Mac.
Sözeri-Varma et al. (2011)	Clinical general population: Women who underwent hysterectomy and/or oophorectomy (*N* = 40). Did not report sexual orientation	Turkish version of Golombok Rust Inventory of Sexual Satisfaction (GRISS)	After surgery, hysterectomy and/or oophorectomy, participants reported significantly lower SS than preoperatively	Mic.
Stephenson et al. (2011)	Non-clinical college students: Heterosexual and homosexual men (*n* = 93) and women (*n* = 451)	Sexual Satisfaction Scale-Women (SSS-W). The scale was modified to evaluate the SS of men	In men, love, self-esteem, and resources were associated with higher SS. These variables accounted for 25% of SS In women, love, self-esteem, resources, experience, pleasure, and expression were associated with higher SS. These variables accounted for 22% of SS	Mic. Mes. Exo.

Stephenson & Meston (2011)	Non-clinical college students: Heterosexual women (N = 200)	Sexual Satisfaction Scale-Women (SSS-W)	Sexual costs were associated with sexual functioning and in turn were associated with SS. That is, sexual functioning was a mediating variable between sexual costs and SS In women who reported low levels of anxious attachment, sexual problems were a cost that decreased SS	Mes.
Stephenson & Sullivan (2009)	Study 1: Non-clinical college students (n = 146), heterosexual men and women Study 2: Non-clinical college students (n = 119), heterosexual men and women	Pinney Sexual Satisfaction Inventory (PSSI)	Study 1: Perceiving high discrepancies between participants' own behavior and that of their partner was associated with lower SS. Having an exclusive relationship with a partner was associated with higher SS Study 2: Participants who received information about social norms reported significantly greater SS than participants who did not receive information	Mic. Mes.
Stewart & Szymanski (2012)	Non-clinical college students: Heterosexual women (N = 308)	Sexual satisfaction subscale of the Multidimensional Sexuality Questionnaire	Perceptions of problematic pornography use and the interaction between perceptions of problematic pornography use and length of the relationship were associated with lower SS. These variables accounted for 3% of SS	Mic. Mes.

Štulhofer et al. (2010)	Clinical and non-clinical college students: Men and women with sexual problems (*n* = 265) and healthy men and women (*n* = 279). Heterosexual and others	New Sexual Satisfaction Scale	Participants with sexual problems reported significantly lower SS than healthy participants	Mes.
Sung & Lim (2009)	Clinical general population: Heterosexual women with hysterectomy (*N* = 118)	Korean version of Sexual Satisfaction Subscale (K-SSS)	A negative body image was associated with lower SS, while partner support was associated with higher SS. These variables accounted for 30% of SS	Mic. Mes.
Theiss (2011)	Non-clinical general population: Heterosexual couples (*N* = 220)	6 items	Uncertainty in the relationship was associated with indirect communication about sex and in turn with lower SS in husbands and wives. In addition, indirect communication from the husband or wife was associated with lower SS in the wife or husband (partner effect)	Mes.

Toorzani et al. (2010)	Non-clinical general population: Heterosexual couples (*N* = 140)	3 items to assess women's SS 10 items to assess men's SS	In wives, no significant differences in SS depending on the contraceptive method used The highest SS was reported by husbands who used the contraceptive injection method, followed by those whose partner underwent tubal ligation. Both groups reported greater SS than that of men who used condoms	Mes.
Traupmann et al. (1983)	Non-clinical college students: Men (*n* = 70) and women (*n* =119). Did not report sexual orientation	5 items	In women, no significant differences in the levels of SS as a function of equity in their relationship In men, SS was significantly higher when they were "over-benefited" (i.e., they benefited more than women)	Mes.
Tripoli et al. (2011)	General clinical and non-clinical population: Women with chronic pelvic pain (CPP) and endometriosis (*n* = 49), with CPP and another gynecological condition (*n* = 35), and healthy women (*n* = 50). Did not report sexual orientation	Golombok Rust Inventory of Sexual Satisfaction (GRISS)	Women with chronic pelvic pain reported significantly lower SS than healthy women	Mic.

Tudahl et al. (1987)	Clinical general population: Burn patients, men (n = 44) and women (n = 10). Did not report sexual orientation	Burn-specific Health Scale	Men reported significantly greater SS than women	Mic.
Tuinman et al. (2005)	Clinical general population: Heterosexual couples in which husbands were testicular cancer survivors (*N* = 259)	Dutch version of Maudsley Marital Questionnaire (MMQ)	Couples who had been in the relationship during testicular cancer treatment reported significantly greater SS than couples who had started their relationship after testicular cancer treatment	Mic.
Uribe-Alvarado et al. (2011)	Non-clinical college students: Men and women (*N* = 278). Did not report sexual orientation	7 items	No significant differences in SS between men and women	Mic.
Van Lankveld & Ter Kuile (1999)	Clinical and non-clinical general population: Heterosexual men (*n* = 156) and women (*n* = 209) with sexual problems, and men (*n* = 357) and women (*n* = 380) without sexual problem	Dutch version of Golombok Rust Inventory of Sexual Satisfaction (GRISS)	Patients with sexual problems reported significantly lower SS than participants without sexual problems	Mes.

Van Lankveld & Van Koeveringe (2003)	Clinical general population: Heterosexual men – sexually functional (*n* = 34) and sexually dysfunctional urological outpatients (*n* = 23)	Dutch version of Golombok Rust Inventory of Sexual Satisfaction (GRISS)	Participants without sexual dysfunctions reported significantly greater SS than participants with sexual dysfunctions	Mes.
Vural & Temel (2009)	Non-clinical general population: Heterosexual couples in the experimental group (*n* = 36), and in the control group (*n* = 35)	Turka version of Golombok Rust Inventory of Sexual Satisfaction (GRISS)	Women included in a premarital counseling intervention program reported significantly greater SS than women who were not In men, no significant differences in SS	Mes.

Warehime & Bass (2008)	Non-clinical general population: Men (*n* = 1,511) and women (*n* = 1,921). Did not report sexual orientation	2 items	In men, increased frequency of sexual activity was associated with low physical SS, and greater intimacy and commitment was associated with high physical SS. In women, age, having been married, being more educated, and having sex to express love were associated with lower physical SS In men, greater intimacy and commitment were associated with high emotional SS, while having been married and having sex to express love was associated with low emotional SS. In women, good health, intimacy and commitment were associated with higher emotional SS. By contrast, being single, age, having children under 6 years, increased frequency of sexual activity, and having sex to express love were associated with lower emotional SS	Mic. Mes. Exo.

Wingard et al. (1992)	Clinical general population: Heterosexual men (*n* = 82) and women (*n* = 53) with bone marrow transplantation	1 item	In both genders, a diagnosis of aplastic anemia instead of malignancy as the reason for the transplant, younger age at the time of transplantation, relationship satisfaction, satisfaction with one's appearance, and overall life satisfaction were associated with high SS	Mic. Mes.
Yela (2000)	Non-clinical college students: Heterosexual men and women (*n* = 368), and participants from homosexual associations (*n* = 44)	1 item	In men, love and frequency of intercourse were associated with higher SS, and length of the relationship and having an exclusive relationship with a partner were associated with lower SS. These variables accounted for 35% of SS In women, erotic passion, frequency of sex, and open communication were associated with higher SS, while Christian religious attitudes and jealousy were associated with lower SS. These variables accounted for 31% of SS	Mes. Mac.
Young et al. (1998)	Non-clinical general population: Heterosexual men (*n* = 181) and women (*n* = 616)	Scale adapted from the Sexual Satisfaction Scale of the Derogatis Sexual Functioning Inventory	No significant differences in SS between men and women. Non-sexual aspects of the relationship, marital satisfaction, frequency of self-spouse orgasm, frequency of sexual activity, and uninhibitedness accounted for 60.2% of SS	Mic Mes.

Young et al. (2000a)	Non-clinical general population: Heterosexual women (N = 641)	Scale adapted from the Sexual Satisfaction Scale of the Derogatis Sexual Functioning Inventory	Age, non-sexual aspects of the relationship, marital satisfaction, consistency of orgasm, frequency of sex, and sexual activities other than intercourse were associated with higher SS, while religiosity was associated with low SS. These variables accounted for 65% of SS	Mic. Mes. Mac.
Young et al. (2000b)	Non-clinical general population: Heterosexual women (N = 148)	Scale adapted from the Sexual Satisfaction Scale of the Derogatis Sexual Functioning Inventory	Non-sexual aspects of the relationship, marital satisfaction, consistency of orgasm, frequency of sex, and sexual activities other than intercourse were associated with higher SS and accounted for 73% of SS	Mes.
Yucel & Gassanov (2010)	Non-clinical general population: Heterosexual couples (N = 433)	5 items	Marital satisfaction and frequency of sex were associated with higher own and partner SS. Partner infidelity was associated with lower own and partner SS. Finally, watching pornography, especially if only a partner watched it, was associated with lower own and partner SS. These variables accounted for 46% and 42% of SS in wives and husbands, respectively	Mic. Mes.

Zerach et al. (2010)	General clinical and non-clinical population: Heterosexual men – ex-prisoners of war with post-traumatic stress disorder (*n* = 105) and without symptoms (*n* = 94)	Index of Sexual Satisfaction (ISS)	Symptoms of post-traumatic stress disorder were associated with lower SS	Mic.
Zhang et al. (2012)	Non-clinical general population: Heterosexual couples (*N* = 1,083)	1 item	In men, being five years younger than their wife or more was associated with low SS In women, being younger than their husband was associated with high SS	Mic.
Ziherl & Masten (2010)	Non-clinical college students: Heterosexual men (*n* = 74) and women (*n* = 174)	Golombok Rust Inventory of Sexual Satisfaction (GRISS)	Frequency of intercourse, enjoyment of sex, and being male were associated with higher SS. By contrast, desired frequency of sex and participants' estimation of their partner's enjoyment during sex were associated with lower SS. These variables accounted for 54% of SS	Mic. Mes.
Zillmann & Bryant (1988)	Non-clinical college students and general population: Heterosexual men and women (*N* = 160)	*Ad hoc* questionnaire	Participants who watched pornography reported significantly lower SS than participants who did not	Mic.

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ESTUDIO 2

Validation of the Interpersonal Exchange Model of Sexual Satisfaction Questionnaire in a Spanish Sample

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Validation of the Interpersonal Exchange Model of Sexual Satisfaction Questionnaire in a Spanish Sample

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Abstract

The Interpersonal Exchange Model of Sexual Satisfaction Questionnaire (IEMSSQ) contains a number of separate measures that, together, have been useful in enhancing understanding of sexual satisfaction because it is based on a validated theoretical framework and has good psychometric properties. The present study aimed to determine the psychometric properties of the IEMSSQ in a Spanish sample of 520 men and 701 women in a mixed-sex relationship. Participants completed Spanish translations of the IEMSSQ, the Index of Sexual Satisfaction, the Dyadic Adjustment Scale, and the Massachusetts General Hospital-Sexual Functioning Questionnaire. The results showed that the Spanish IEMSSQ has good psychometric properties. Internal consistency values were excellent. For the most part, test-retest reliabilities were good, except for the equality components, for which they were moderate. Consistent with predictions, the various subscales were correlated with scores on sexual satisfaction, dyadic adjustment, and sexual functioning, demonstrating good concurrent and convergent validity. The applicability of the IEMSSQ for use with Spanish speakers in clinical and research settings is discussed.

Keywords: sexual satisfaction, Interpersonal Exchange Model of Sexual Satisfaction, social exchange theories, reliability, validity.

Validation of the Interpersonal Exchange Model of Sexual Satisfaction Questionnaire in a Spanish Sample

Sexual satisfaction is an important aspect of people's lives and has been shown to be closely related to their relationship satisfaction, sexual functioning, and quality of life (Byers, 2005; Byers & Rehman, 2014; Sánchez-Fuentes, Santos-Iglesias, & Sierra, 2014; Ventegodt, 1998). To fully understand factors affecting sexual satisfaction (and human sexuality in general), it is important that research be guided by theory (Byers, 1999; Lawrance & Byers, 1995; Öberg, Fugl-Meyer, & Fugl-Meyer, 2002; Sprecher & Cate, 2004; Stulhofer, Busko, & Brouillard, 2010). The Interpersonal Exchange Model of Sexual Satisfaction (IEMSS; Lawrance & Byers, 1992) is a well-validated theoretical framework developed to explain and understand sexual satisfaction within relationships. The Interpersonal Exchange Model of Sexual Satisfaction Questionnaire (IEMSSQ; Lawrance, Byers, & Cohen, 2011) was developed within the framework of the IEMSS to provide measures that corresponded to the proposed conceptual definition of sexual satisfaction (i.e., *an affective response arising from one's subjective evaluation of the positive and negative dimensions associated with one's sexual relationship*; Lawrance & Byers, 1995, p. 268) as well as the components proposed in the model to result in higher sexual satisfaction.

There has been little research investigating sexual satisfaction in Spanish-speaking countries. What research has been done has not been based on theory and has used poor measures (e.g., Castellanos-Torres, Álvarez-Dardet, Ruiz-Muñoz, & Pérez, 2013; Ministerio de Sanidad y Política Social, 2009; Sierra, Vallejo-Medina, Santos-Iglesias, & Lameiras Fernández, 2012), leading to some conflicting findings about the sexual satisfaction of Spanish individuals and couples. Thus, little is known about the sexual satisfaction of Spanish speakers in any country and/or the factors affecting sexual satisfaction. However, it has been recognized that culture affects sexual function (Brotto, Chik, Ryder, Gorzalka, & Seal, 2005), and the results of research in other countries may not be generalizable to Spanish people. Therefore, it is important to do research with Spanish-speaking individuals specifically. Therefore, the main goal of the current study was to translate and provide evidence for the reliability and validity of a

Spanish version of the IEMSSQ that can be used in future research. We also sought to provide more information about the sexual satisfaction of Spanish men and women.

The Interpersonal Exchange Model of Sexual Satisfaction Questionnaire

In keeping with social exchange theories (Thibaut & Kelley, 1959), the IEMSS proposes that sexual satisfaction is influenced by four different components: (a) the balance of sexual rewards and sexual costs in the relationship (REW-CST); (b) the way in which sexual rewards and costs compare to the expected level of sexual rewards and costs, termed comparison level (CL_{REW}-CL_{CST}); (c) the perceived equality of sexual rewards (EQ_{REW}) and costs (EQ_{CST}) between partners; and (d) the quality of the nonsexual aspects of the relationship (Lawrance & Byers, 1992, 1995). Sexual rewards are exchanges that are gratifying or pleasing whereas sexual costs are sexual exchanges that cause pain, embarrassment, or anxiety or demand mental or physical effort. Byers and her colleagues (Byers, Demmons, & Lawrance, 1998; Byers & MacNeil, 2006; Lawrance & Byers, 1995; Renaud, Byers, & Pan, 1997) have provided evidence that, as proposed, people report higher sexual satisfaction the more (a) their sexual rewards exceed sexual costs in the relationship; (b) their balance of sexual rewards and costs compares favorably to their expectations; (c) they perceive that they and their partner experience equal levels of sexual rewards and costs; and (d) they are more satisfied with the nonsexual aspects of their relationships.

The IEMSSQ provides measures of global sexual satisfaction (GMSEX), global of relationship satisfaction (GMREL), and IEMSS components (Exchanges Questionnaire; see Lawrance et al., 2011). It also includes a Rewards/Costs Checklist that can be used for assessing specific sexual exchanges (e.g., oral sex, degree of emotional intimacy) that can be experienced as sexual rewards and/or sexual costs in the relationship. The IEMSSQ has three main strengths that directly map onto past criticisms (Lawrance & Byers, 1995; Sprecher & Cate, 2004; Stulhofer et al., 2010). First, it is based on a theoretical framework that has been demonstrated to explain sexual satisfaction within relationships in countries as diverse as Canada and China and with both dating and long-term couples (Byers et al., 1998; Byers & MacNeil, 2006; Lawrance & Byers, 1995; Renaud et al., 1997). Thus, it can be used to understand the mechanisms that lead to greater or poorer sexual satisfaction in different populations. Second, the measures used in testing the IEMSS (i.e., GMSEX, GMREL, and Exchanges Questionnaire) do not include items that are actually predictors of sexual satisfaction (e.g., frequency of sexual activity, orgasm consistency), overcoming a

methodological weakness found in other instruments (i.e., predictor-criterion overlap; see Mark, Herbenick, Fortenberry, Sanders, and Reece, 2014). Third, the English version of the IEMSSQ has good psychometric properties (Lawrance et al., 2011). For example, the GMSEX and the GMREL have high internal consistency reliabilities ($\alpha >$ .90) and test-retest reliabilities greater than .61 (18 months) and .70 (3 months). Regarding its validity, the GMSEX is correlated with the Index of Sexual Satisfaction (Hudson, Harrison, & Crosscup, 1981) as well as with a single item of sexual satisfaction. The GMREL is correlated with the Dyadic Adjustment Scale (Spanier, 1976). Finally, test-retest reliabilities of IEMSS components assessed by the Exchanges Questionnaire range from .43 to .67 at three months and .25 to .56 at 18 months. This indicates that, as would be expected (Lawrance et al., 2011), some of its components (the equality components in particular) are more stable over shorter than over longer periods of time. Further, Mark et al. (2014) demonstrated that the GMSEX performs better than do other validated measures of sexual satisfaction.

Gender and Sexual Satisfaction

Past research based mostly in North America has found men to be more sexually satisfied than women (Petersen & Hyde, 2010). Sexual Script Theory (McCormick, 1987, 2010) points to gender role socialization as an explanation for gender differences in sexual behavior, motivation, cognitions, and affect (including satisfaction). That is, men and women are socialized to a traditional sexual script that places more restrictions on female sexuality than on male sexuality (McCormick, 2010), including expectations that inhibit women's communication about sexual preferences, discount the importance of their sexual pleasure, and restrict their access to sexual pleasure and satisfaction (Tiefer, Hall, & Tavris, 2002).

This gender difference is likely even greater in Spain than it is in North America, because Spain is a country where there is significant gender inequality and people still commonly endorse traditional sexual scripts and sexist attitudes that discount the importance of sexual pleasure for women (Santos-Iglesias, Vallejo-Medina, & Sierra, 2014). According to Petersen and Hyde (2010): "Societies with a large gender difference in power are expected to have greater gender differences in sexuality than more egalitarian societies" (p. 23). Consistent with this view, there is diverse evidence that as cultures become more egalitarian, men and women become more similar in the sexual strategies they pursue, their sociosexual orientation, their sexual well-being, and

the prevalence of diverse sexual experiences (Laumann et al., 2006; Petersen & Hyde, 2010; Schmitt, 2005; Schwartz & Rubel, 2005). However, although research in Spain has found that both men and women in Spain are sexually satisfied (Castellanos-Torres et al., 2013; Sierra et al., 2012), findings about gender differences have been mixed. Therefore, we examined whether there are gender differences in sexual satisfaction, the IEMSS components, and the number of sexual rewards and sexual costs.

The Present Study

The main aim of the present study was to translate and evaluate the psychometric properties of the IEMSSQ for men and women in a Spanish sample. We sought to establish the reliability of the IEMSSQ for men and women separately in three ways. First, we verified the internal consistency of the GMSEX and GMREL, the two multi-item scales. Second, we examined the four-week and six-week test-retest reliabilities of all of the measures that make up the IEMSSQ. Third, we examined the item-level temporal reliability of all of the IEMSSQ items.

To test the validity of the IEMSSQ, we first examined the construct validity of two of its measures (GMSEX and GMREL). To confirm that the two scales assess different but related components we performed a confirmatory factor analysis (CFA) with the items comprising the two measures. We did not perform a CFA on the entire IEMSSQ, because it consists of a number of separate, stand-alone but conceptually linked measures that are not intended to be combined into a total score. Further, some of the constructs are assessed using a difference score based on two items. With respect to construct validity, we expected the GMSEX and GMREL to emerge as related but distinct constructs.

To establish the concurrent validity of the IEMSSQ, we examined the associations between each IEMSSQ measure (GMSEX, GMREL, REW-CST, CL_{REW}-CL_{CST}, $EQ_{REW,}$ EQ_{CST}, number of sexual rewards, and number of sexual costs) and related constructs: other measures of sexual satisfaction, dyadic adjustment, and problems with sexual functioning. According to the IEMSS (Lawrance & Byers, 1995), the nonsexual aspects of the relationship contribute to sexual satisfaction as well as to the experience of sexual exchanges. In keeping with this, past research has consistently demonstrated that greater sexual satisfaction is related to greater relationship satisfaction and marital adjustment (Byers, 2005; Lawrance & Byers, 1995). Within the framework of the IEMSS, problems with sexual functioning would be experienced as sexual costs and thus associated with lower sexual satisfaction and less favorable sexual

exchanges. Research has confirmed this prediction (e.g., MacNeil & Byers, 1997; Stephenson & Meston, 2011). Further, greater relationship satisfaction has also been shown to be associated with fewer sexual problems (Heiman et al., 2011). Therefore, with respect to concurrent validity, we predicted the following:

H1. Higher scores on the GMSEX, all of the IEMSS components (GMREL, REW-CST, CL_{REW}-CL_{CST}, EQ_{REW}, EQ_{CST}), more specific sexual rewards, and fewer specific sexual costs would be associated with higher scores on the Index of Sexual Satisfaction (Hudson et al., 1981) and the sexual satisfaction item from the Massachusetts General Hospital Sexual Functioning Questionnaire (Fava, Rankin, Alpert, Nierenberg, & Worthington, 1998).

H2. Higher scores on the GMSEX, all of the IEMSS components, more specific sexual rewards, and fewer specific sexual costs would be associated with higher scores on the Dyadic Adjustment Scale (Santos-Iglesias, Vallejo-Medina, & Sierra, 2009).

H3. Higher scores on the GMSEX, all of the IEMSS, more specific sexual rewards, and fewer specific sexual costs would be associated with higher scoes on the Massachusetts General Hospital Sexual Functioning Questionnaire (excluding sexual satisfaction), a measure of overall sexual functioning.

Based on sexual script theory we predicted that:

H4. Men would show higher scores than would women on all of the IEMSSQ measures.

Finally, a validated Spanish version of the IEMSSQ would be useful for the study of sexual satisfaction in all Spanish-speaking communities, including Spanish-speakers living in North America (see Adams, DeJesus, Trujillo, & Cole, 1997; Learman, Huang, Nakagawa, Gregorich, & Kuppermann, 2008). Therefore, we also sought to provide description information about the current sample and compared these scores to those from the original Canadian study as a frame of reference for future research comparing Spanish-speaking and English-speaking samples.

Method

Participants and Procedure

Using a convenience sampling procedure, participants from the general Spanish population were recruited at various public venues (e.g., libraries, waiting rooms at hospitals, employment offices) to participate in a study about human sexuality and sexual relationships based on the following inclusion criteria: (a) 18 years old or older; (b) Spanish speaking; and (c) in a heterosexual relationship for at least six months at the time of the study (to ensure that participants were in a committed and stable relationship). Participants returned the completed paper-and-pencil questionnaire to the experimenter (who was not present during the questionnaire completion) in a sealed privacy envelope. Participants who gave their written consent and provided their written contact information were also contacted four and six weeks after they completed the initial questionnaire to set up an appointment to complete the questionnaires again in a laboratory at the Faculty of Psychology. To protect confidentiality, questionnaires and contact information were linked using a code number and no personal, identifying information was required at any time.

The final sample consisted of 1,221 heterosexual participants (520 men and 701 women) with ages ranging from 18 to 67 (M = 31.67, SD = 11.43). Regarding education, 60.50% of participants reported that their highest level of education was university studies, 29.40% secondary studies, 9.30% primary studies, and 0.80% no formal education. The average length of the relationship was 8.93 years (SD = 10.35). Almost half of participants (48.80%) reported being involved in an exclusive noncohabiting dating relationship with a partner, 18.10% lived with a partner, and 28.70% were married. Only 4.40% reported not being in an exclusive relationship. The average age of first sexual experience (oral, anal, and/or vaginal intercourse) was 17.74 years old; the median number of sexual partners with whom they had oral, anal, or vaginal sexual intercourse was three (range = 1 - 30; M = 4.49, SD = 4.84). We examined gender differences in demographic characteristics and sexual history (age, length of the relationship, age of the first sexual experience, and number of sexual partners) using a one-way MANOVA. It was significant (Wilks' λ = .98, F (4, 1100) = 14.74, $p < .001$, η^2_p = .05). Follow-up analyses of variance (ANOVAs) indicated that, compared to the women, the men were significantly older (men M = 33.31, SD = 11.80; women M = 29.60, SD = 10.25), were in a longer duration relationship (men M = 9.46, SD = 10.75; women M = 7.75, SD = 9.12), and reported a greater number of partners

(men *M* = 5.40, *SD* = 5.61; women *M* = 3.86, *SD* = 4.16). The men and women did not differ in the age of their first sexual experience.

At Time 2, 111 participants completed the questionnaire (43 men and 68 women), and an overlapping but somewhat different sample of 104 (41 men and 63 women) completed the questionnaire at Time 3. Four separate MANOVAs were performed to test whether participants who did and did not participate at Time 2 and Time 3 differed in their demographic characteristics and sexual history and/or the IEMSSQ variables (GMSEX, GMREL, REW-CST, CL_{REW}-CL_{CST}, EQ_{REW}, EQ_{CST}, number of sexual rewards, and number of sexual costs). None of these analysis yielded significant results, indicating that characteristics of the sample at Time 2 and Time 3 did not differ from those of the full sample.

Measures

Background Questionnaire. A Background questionnaire was used to collect information about gender, age, educational level, length of relationship, type of relationship (exclusive noncohabiting dating relationship, exclusive cohabiting relationship, married, nonexclusive dating relationship), age of first sexual experience (oral, anal, and/or vaginal intercourse), and number of sexual partners.

Interpersonal Exchange Model of Sexual Satisfaction Questionnaire. The IEMSSQ (Lawrance et al., 2011) is comprised of four separate measures: *Exchanges Questionnaire, Global Measure of Sexual Satisfaction, Global Measure of Relationship Satisfaction,* and *Rewards/Costs Checklist*. Each is described here. Evidence for the internal consistency, test-retest reliability, and validity for each of these scales has been provided in the introduction (see Lawrance et al., 2011).

The *Exchanges Questionnaire* consists of six items. Item 1 assesses the overall level of sexual rewards (REW) on a nine-point scale ranging from *Not at all rewarding* (1) to *Extremely rewarding* (9). Item 2 assesses level of sexual rewards in comparison to the expected level of rewards (CL_{REW}) on a nine-point scale ranging from *Much less rewarding in comparison* (1) to *Much more rewarding in comparison* (9). Item 3 assesses the level of rewards in comparison to the level of rewards their partner receives on a nine-point scale ranging from *My rewards are much higher* (1) to *My partner's rewards are much higher* (9). Parallel items are used to assess sexual costs (items 4 through 6). The following components were computed based on these items. The

overall balance of rewards and costs (REW-CST) was calculated by subtracting item 4 from item 1. Comparison level of sexual rewards and costs (CL_{REW}-CL_{CST}) was calculated by subtracting item 5 from item 2. In both cases, possible scores range from -8 to 8, so that higher scores represent greater sexual rewards. Finally, for calculating the perceived equality of sexual rewards and sexual costs (EQ_{REW} and $EQ_{CST,}$ respectively) items 3 and 6 were recoded such that the middle point of the response scale (5), which represents perfect equality, was assigned a score of 4 and the endpoints were assigned a score of 0. Thus, higher scores represent greater equality between partners.

The *Global Measure of Sexual Satisfaction* (GMSEX) assesses overall satisfaction with the sexual relationship with the partner. Respondents rate their sexual relationship on five seven-point bipolar scales: *very bad-very good*; *very unpleasant-very pleasant*; *very negative-very positive*; *very unsatisfying-very satisfying*; *worthless-very valuable*. Scores range from 5 to 35, with higher scores indicating greater sexual satisfaction.

The *Global Measure of Relationship Satisfaction* (GMREL) is identical to the GMSEX but assesses satisfaction with the overall relationship with the partner.

The *Rewards/Costs Checklist* consists of 58 items representing different sexual exchanges (e.g., *level of affection you and your partner express during sexual activities; frequency of sexual activities*). Participants rate each sexual exchange as a reward, a cost, both a reward and a cost, or neither a reward nor a cost in their sexual relationship. In the present study, an exchange was considered a sexual reward if the respondent indicated it was a reward or both a reward and a cost; it was considered a sexual cost if the respondent indicated that it was a cost or both a reward and a cost. The total number of sexual rewards and cost was determined for each participant.

Massachusetts General Hospital Sexual Functioning Questionnaire. Originally created in English by Fava et al. (1998), we used the Spanish version of the Massachusetts General Hospital-Sexual Functioning Questionnaire (Sierra et al., 2012) for this study. It is composed of five items assessing sexual functioning in different areas during the past month: interest, arousal, orgasm, erection (only for men), and overall sexual satisfaction (e.g., "*How has your interest in sex been over the past month?"; "How has your ability to achieve orgasm been over the past month?").* Responses were given on a five-point scale ranging from *Totally absent* (0) to *Normal* (4). Because the possible range of scores was different for men and women, we used the mean score rather than the total score. To avoid the overlap between the sexual

functioning and sexual satisfaction measures, we excluded item 5 (sexual satisfaction) in calculating the mean and used it separately as an additional measure of sexual satisfaction. Higher scores indicated better sexual functioning. This scale has been shown to have good reliability and good concurrent validity with the Changes in Sexual Functioning Questionnaire (Labbate & Lare, 2001). Similarly, the Spanish version showed good reliability and convergent validity (Sierra et al., 2012). In this study, internal consistency was high (α = .85 for men; .87 for women.)

Index of Sexual Satisfaction (Hudson et al., 1981). The 25-item Index of Sexual Satisfaction (Hudson et al., 1981) assesses overall sexual satisfaction within the relationship (e.g., *"I feel that my partner enjoys our sex life"; "My sex life is monotonous"*). We used the Spanish translation by Santos-Iglesias, Sierra et al. (2009). Responses are on a five-point scale from *Never* (0) to *Always* (4). Greater scores indicate greater sexual satisfaction. Both the original and the Spanish version showed good reliability and significant positive correlations with measures of sexual desire and arousal (Hudson et al., 1981; Santos Iglesias, Sierra et al., 2009). In the present study internal consistency was high (α = .91 for men; .93 for women).

Dyadic Adjustment Scale. We used the 13-item abbreviated version of the Spanish Dyadic Adjustment Scale (Santos-Iglesias, Vallejo-Medina et al., 2009; e.g., "*How often do you and your partner quarrel*?"; "*Do you and your mate engage in outside interests together*?"). The scale uses both six-point (*Always disagree* (0) to *Always agree* (5)) and five-point (*Never* (0) to *Every day* (4)) response options, depending upon the items. Higher scores indicate greater adjustment. Both the original and the Spanish version (Spanier, 1976) have been shown to have adequate internal consistency and to correlate with measures of partner communication, supporting their validity (Santos-Iglesias, Vallejo-Medina et al., 2009; Spanier, 1976). In the present study internal consistency was high (α = .84 for men; .83 for women).

Development of the Spanish Version of the IEMSSQ

The English version of the IEMSSQ was translated into Spanish by an expert in sexuality research in collaboration with one of the original developers of the English scale who was consulted to clarify the meaning of some items. Both the translated and the original version were given to a bilingual expert in translating psychological and sexological manuscripts to assure the correspondence between the two versions. Once translated, the Spanish version was sent to five Spanish experts in psychological

assessment and sexuality research to identify and suggest needed changes to items that were not clear and understandable. Changes were made when four of the five experts suggested the same changes. In this phase, items 1, 2, 4 and 5 of the Exchanges Questionnaire were slightly modified. Finally, the resulting version was given to 15 individuals with similar characteristics to the final sample. They were given the same task as experts in psychological assessment and sexuality research, using the criterion of 80% agreement for making changes. No changes were made in this phase (see Appendix).

Results

Confirmatory Factor Analysis

To establish that the GMSEX and GMREL assessed two different but related constructs, we performed a CFA using Mplus 7.0. Two models were tested: a single-dimensional model in which all items loaded on the same construct; and a two-dimensional model in which the items belonging to the GMSEX and the GMREL loaded on two different but related components. A robust maximum likelihood estimation procedure was used (Wang & Wang, 2012). To assess model fit, we used the following criteria: Comparative Fit Index (CFI) and Tucker-Lewis Index (TLI) > .90, and Root Mean Square Error of Approximation (RMSEA) < .08 (Hu & Bentler, 1999; Wang & Wang, 2012). The results showed a better fit for the two-factor solution (χ^2_{34} = 211.73, p < .001, CFI = .94, TLI = .92, RMSEA = .06) than for the single factor solution (χ^2_{35} = 606.68, p < .001, CFI = .81, TLI = .75, RMSEA = .11; see Figure 1).

Reliability of the IEMSSQ

To establish the reliabilities of the measures contained in the IEMSSQ, we examined the internal consistencies (Cronbach's alpha), the four-week (correlations between Time 1 and Time 2 scores) and six-week (correlations between Time 1 and Time 3 scores) test-retest reliabilities, and the item-level temporal reliabilities. Both the GMSEX and GMREL had high internal consistency (GMSEX α = .92 for the men and .93 for the women; GMREL α = .94 for both genders). Test-retest reliabilities showed some variation across variables and gender. Overall, test-retest reliabilities were good for men (median = .78), except for EQ_{REW} after six weeks. In the case of women, test-retest reliabilities were good (median = .70) except for EQ_{REW} after both four and six weeks, and number of sexual rewards after six weeks (see Table 1).

Item-level temporal reliabilities were calculated for all the items on the IEMSSQ, except the Rewards/Cost Checklist, using Cronbach's alpha as recommended by Jonason and Webster (2010). We did not perform this test with the Rewards/Cost Checklist items because of the unordered categorical response scale. Temporal reliabilities were good. All of the values were greater than .87 in men and .85 in women for the GMSEX. For the GMREL, values were greater than .87 in men, and .76 in women. Finally, values were greater than .82 in men and .74 in women on the Exchanges Questionnaire.

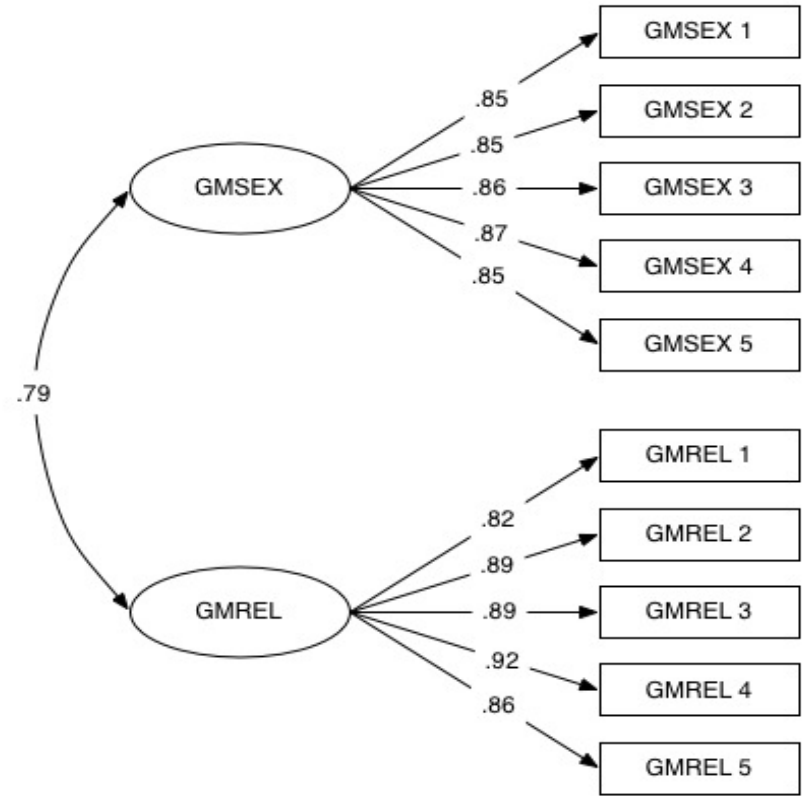

Figure 1.

Two-dimensional confirmatory factor analysis of the Global Measure of Sexual Satisfaction and the Global Measure of Relationship Satisfaction. *Note*. N = 1,165. GMSEX: Global Measure of Sexual Satisfaction; GMREL: Global Measure of Relationship Satisfaction.

Table 1

Four week and six week test-retest reliability for measures included in the IEMSSQ

	Men		Women	
	Time 1-Time 2 (4 weeks) $n = 43$	Time 1-Time 3 (6 weeks) $n = 41$	Time 1-Time 2 (4 weeks) $n = 68$	Time 1-Time 3 (6 weeks) $n = 63$
GMSEX	.91***	.76***	.84***	.83***
GMREL	.90***	.78***	.72***	.60***
REW-CST	.82***	.87***	.78***	.79***
CL_{REW}-CL_{CST}	.72***	.79***	.74***	.68***
EQ_{REW}	.57***	.49***	.38***	.49***
EQ_{CST}	.55***	.58***	.58***	.59***
Number REW	.87***	.77***	.62***	.32**
Number CST	.92***	.86***	.74***	.75***

Note. GMSEX: Global Measure of Sexual Satisfaction; GMREL: Global Measure of Relationship Satisfaction; REW-CST: Balance of sexual rewards to costs; CL_{REW}-CL_{CST}: Comparison level of sexual rewards to costs; EQ_{REW}: Equality of sexual rewards; and EQ_{CST}: Equality of sexual costs; Number REW: number of sexual rewards; and, Number CST: number of sexual costs.

** $p < .01$, *** $p < .001$.

Construct and Concurrent Validity

We used zero-order correlations to test our construct and concurrent validity hypotheses (see Table 2). Given the large sample size, we adopted a conservative alpha of $p < .01$. In general, the results provide evidence for both the construct and concurrent validity of the IEMSSQ measures, with effect sizes ranging from small to large using Cohen's (1998) criteria (i.e., .10 = small effect; .30 = moderate effect; and .50 = large effect). As predicted, for both the men and women, all the IEMSSQ measures, with the exception of EQ_{REW} and EQ_{CST}, were significantly associated with higher sexual satisfaction as assessed by both the single item measure and a previously validated multi-item scale (hypothesis 1), greater dyadic adjustment (hypothesis 2), and better sexual functioning (hypothesis 3). However, there was some variation in the strength of

the associations for the men and women. For example, EQ_{REW} was significantly associated with sexual satisfaction and sexual functioning for women but not for men. Similarly, EQ_{CST} was significantly associated with relationship satisfaction and sexual functioning for women but not for men. To determine whether the magnitude of the correlations between each pair of measures differed significantly for men and women, we performed a series of Fisher *r* to *z* transformations and used these to assess the significance of the differences between each pair of correlations coefficients. Because of the large number of comparisons (32), we used a Bonferroni correction to protect against inflated Type I error (α = .001). Only two of the pairs of correlations (i.e., REW-CST and the sexual satisfaction item, and REW-CST and sexual functioning) were statistically different for the men and women; these two correlations with significantly greater for the women than for the men. This suggests that the overall pattern of correlations between the IEMSSQ measures and measure of relationship and sexual functioning are similar for men and women.

Table 2

Zero-order correlations between IEMSSQ measures and sexual satisfaction, dyadic adjustment, and sexual functioning in men and women.

Variable	GMSEX	GMREL	REW-CST	CLrew-CLcst	EQrew	EQcst	Nºrew	Nºcst
Men								
ISS	.64***	.53***	.58***	.54***	.09	.27***	.46***	-.45***
Ítem SS-MGHSFQ	.40***	.24***	.38***	.35***	.02	.16**	.25***	-.40***
Dyadic adjustment	.49***	.58***	.34***	.39***	.07	.11	.38***	-.27***
Sexual functioning	.37***	.19***	.33***	.25***	.01	.01	.22***	-.30***
Women								
ISS	.69***	.51***	.65***	.58***	.20***	.30***	.49***	-.51***
Ítem SS-MGHSFQ	.50***	.39***	.54***	.39***	.15***	.25***	.32***	-.41***
Dyadic adjustment	.48***	.59***	.41***	.36***	.07	.21***	.46***	-.39***
Sexual functioning	.51***	.33***	.52***	.39***	.17***	.24***	.31***	-.40***

Note. N = 520 men and 701 women. GMSEX = Global Measure of Sexual Satisfaction; GMREL = Global Measure of Relationship Satisfaction; REW-CST = Balance of sexual rewards to costs; CL_{REW}-CL_{CST} = Comparison level of sexual rewards to costs; EQ_{REW} = Equality of sexual rewards; EQ_{CST} = Equality of sexual costs; Nº REW = number of sexual rewards; Nº CST = number of sexual costs; ISS = Index of Sexual Satisfaction; Ítem SS-MGHSFQ = item of sexual satisfaction of Massachusetts General Hospital-Sexual Functioning Questionnaire.

** $p < .01$ *** $p < .001$.

Sexual Satisfaction in Spanish Men and Women

Table 3 provides the means and standard deviations for all of the IEMSSQ measures at the first assessment period. We examined gender differences in the Time 1 measures using a one-way multivariate analysis of covariance (MANCOVA). We used age, length of the relationship and number of partners as covariates because men and women differed significantly on these characteristics. The multivariate effect was not significant (Wilks' $\lambda = .99$, F (8, 1008) = 1.23, $p = .27$, $\eta^2_p = .01$). Because we did not find gender difference, we have only reported the overall means and standard deviations in Table 3. Both the men and the women reported high levels of sexual and relationship satisfaction, a favorable balance of sexual rewards to costs, a favorable comparison of

level of sexual rewards to costs, a high number of sexual rewards, and a low number of sexual costs. They also reported average to high equality of sexual rewards and equality of sexual costs.

The means for each of the IEMSSQ measures at Time 1 in the original Canadian sample (Lawrance & Byers, 1995) are also reported in Table 3. We compared the data in the current study to the Time 1 data found by Lawrance and Byers (1995) using a 2 (gender) × 2 (country) MANOVA. The main effect for country was significant, Wilks' $\lambda = .92$, F (6, 1311) = 16.70, $p < .001$, $\eta^2_p = .07$. The interaction was also significant, Wilks' $\lambda = .98$, F (6, 1311) = 3.23, $p = .004$, $\eta^2_p = .01$. Follow-up ANOVAs showed that the Spanish men and women reported significantly greater sexual satisfaction, as well as a more favorable balance of sexual rewards to costs, and a more favorable comparison of level of sexual rewards to costs. Canadian men and women reported a significantly greater equality of sexual rewards. However, these effects were small accounting for little variance (between 0.65% and 4.28%). The follow-up ANOVAs did not identify any significant interactions. The number of sexual rewards and the number of sexual costs in the two samples were not compared because Lawrance and Byers (1995) used an earlier version of the Rewards/Costs Checklist that contained fewer items, some of which had different wording than the items in the current version.

Table 3

Mean, standard deviations for GMSEX, components of the IEMSS, number of rewards and number of costs in Spanish and Canadian men and women, and univariate country effects.

	Spain		Canada[a]			
Variable	*M*	*SD*	*M*	*SD*	*F* country	η^2_p
GMESEX	30.73	5.28	28.66	6.46	28.03***	.02
GMREL	31.24	5.07	30.58	4.74	3.38	<. 01
REW-CST	4.29	3.57	3.47	3.89	10.38**	<. 01
CLrew-CLcst	3.35	3.48	1.50	3.56	45.59***	.03
EQrew	2.57	1.41	3.12	1.15	25.36***	.02
EQcst	2.99	1.27	3.13	1.09	2.15	<. 01
Number REW	42.61	9.85				
Number CST	11.95	8.25				

Note. GMSEX = Global Measure of Sexual Satisfaction; GMREL = Global Measure of Relationship Satisfaction; REW-CST = Balance of sexual rewards to costs; CL_{REW}-CL_{CST} = Comparison level of sexual rewards to costs; EQ_{REW} = Equality of sexual rewards; EQ_{CST} = Equality of sexual costs; Number REW = number of sexual rewards; Number CST = number of sexual costs.

[a] Lawrance and Byers (1995).

** $p < .01$ *** $p < .001$.

Discussion

Early research on sexual satisfaction, including in Spain, has been atheoretical (Lawrance & Byers, 1995; Stulhofer et al., 2010), partly because of the lack of well-established measures based on a theoretical framework. The Interpersonal Exchange Model of Sexual Satisfaction (Lawrance & Byers, 1992, 1995) has been demonstrated to be the most useful framework to explain sexual satisfaction (Peck, Shaffer, & Williamson, 2004). Furthermore, the IEMSSQ, which assesses the components of the IEMSS, has been demonstrated to have good psychometric qualities in Canada (Lawrance et al., 2011) and China (Renaud et al., 1997). As such, the availability of a Spanish version of the IEMSSQ could further our understanding of sexual satisfaction in Spanish-speaking individuals. Therefore, the overall goal of the current research was

to translate and establish the psychometric properties of a Spanish IEMSSQ. Our results demonstrate the reliability of the translated measure. We also found support for most of our hypotheses evaluating the construct and concurrent validity, although some correlations were small. Thus, the Spanish version of the IEMSSQ can be used by researchers and clinicians working with Spanish-speaking populations in Spain and other countries to assess sexual satisfaction as well as factors affecting sexual satisfaction.

Psychometric Properties of the IEMSSQ in Spain

The Spanish version of the IEMSSQ overall showed good psychometric properties that are similar to those found in Canadian (see Lawrance et al., 2011) and Chinese samples (Renaud et al., 1997). The internal consistency was excellent both for the measures and for the individual items without being so high that it constitutes a threat to its construct validity (Nunnally & Bernstein, 1994). For the most part, we found that test-retest reliability values were adequate over short periods (four weeks and six weeks) of time. However, test-retest reliabilities for equality of sexual rewards and costs for both men and women, although statistically significant, were only moderate. Previous research with the English version of the IEMSSQ has also found low to moderate test-retest reliabilities for the equality components, especially in dating relationships (Byers & MacNeil, 2006; Lawrance & Byers, 1995). This suggests that the equality components are less stable over time than are other IEMSS components that contribute to sexual satisfaction. This may be because, in the context of social exchange theories (Thibaut & Kelley, 1959), equality components depend on the balance between partners' relative outcomes. That is, they depend not only on an individual's outcomes but also on that person's perceptions of his or her partner's outcomes. Perceptions of the partner are likely to change over the course of a relationship as partners come to see each other more realistically (Byers & Wang, 2004; Sprecher, 2001). Researchers conducting future studies need to take this lower temporal stability of perceptions of equality into account. Although for the most part, number of sexual rewards and costs were stable over time, this was not true for the number of sexual rewards for women after six weeks. Because of the number of sexual rewards and costs have been rarely studied, there is no obvious explanation for this result. More research is needed to examine whether this is an anomalous finding.

We found evidence for the validity of the Spanish IEMSSQ for both men and women. First, the GMSEX and GMREL emerged as two distinct measures, supporting their construct validities. This finding also adds to the literature demonstrating that sexual and relationship satisfaction are independent, although intimately associated, constructs (Hassebrauk & Fehr, 2002). Second, we found support for our predictions, based on the IEMSS, that the IEMSSQ measures (GMSEX, GMREL, REW-CST, CL_{REW}-CL_{CST}, EQ_{REW}, EQ_{CST}, number of sexual rewards, number of sexual costs) would be associated with greater sexual satisfaction, marital adjustment, and sexual functioning with the exception of the equality components for men. This is in keeping with past research that has found an association between greater sexual satisfaction and better marital adjustment (Byers, 2005; Haavio-Mannila & Kontula, 1997; Mark & Jozkowski, 2013) as well as between both sexual satisfaction and marital adjustment and better sexual functioning (Heiman et al., 2011; Stephenson & Meston, 2011). However, our predictions were not supported for the two equality components for men. This may reflect the traditional sexual script in which men are expected to be more concerned about their own desires and preferences than about the experience of their partner and to experience greater rewards than their partner (Byers, 1996). In contrast, women assess their own sexual satisfaction in part based on their partner's sexual satisfaction (McClelland, 2011). As such, inequality between one's own and one's partner's experience would be expected to be associated with women's but not men's sexual satisfaction. However, in keeping with past research that has found that the equality of sexual rewards and sexual costs makes the smallest contribution to sexual satisfaction of the IEMSS components (Byers et al., 1998; Byers & MacNeil, 2006; LaFrance, 2010; Lawrance & Byers, 1995; Peck et al., 2004; Renaud et al., 1997), the equality components had the lowest validity correlations for both men and women; also, the magnitudes of these correlations were not significantly different for men and women. Given that on average our sample reported high sexual and relationship satisfaction, it may be that the equality components are more relevant for less satisfied individuals (Byers & MacNeil, 2006). Finally, only two of the 32 correlations differed between men and women (i.e., the correlations between REW-CST and the sexual satisfaction item, and REW-CST and sexual functioning were significantly stronger for women), demonstrating that the IEMSSQ is equally valid for men and for women.

Sexual Satisfaction in Spanish Men and Women

Our second goal was to provide information about the sexual satisfaction of men and women in Spain. In keeping with past research in Spain (Castellanos-Torres et al., 2013; Sierra et al., 2012), we found that the men and women in our study reported high levels of sexual satisfaction with their current relationship. We extended this research by showing that they also reported positive functioning on all of the factors that have been shown, within the framework of the IEMSS, to contribute to sexual satisfaction—that is, high relationship satisfaction, a favorable balance of sexual rewards to costs, and a favorable comparison level of sexual rewards to costs. These scores were quite similar to those found in the original Canadian study (Lawrance & Byers, 1995), suggesting that Spain and Canada belong to the same sexual regime (Laumann et al., 2006).

However, there were some differences between the current sample and the original sample. First, participants from Spain reported greater sexual satisfaction, as well a more favorable balance of sexual rewards to costs, and more favorable comparison of level of sexual rewards to costs. It might be that Spanish men and women are somewhat more sexually satisfied than are Canadian men and women; however, if so, the differences are not large, given that country accounted for only between 0.65% and 4.28% of the variance. If so, qualitative research is needed to enhance our understanding of why. Alternatively, it might be that differences in the samples in the two studies account for these differences. Specifically, our participants on average had been in their current relationship for 8.9 years, compared to 12 years in the original Canadian study (Lawrance & Byers, 1995), suggesting that our sample contained more individuals in the earlier stages of their relationships. Previous research suggests that sexual satisfaction within a relationship declines over the course of years (Sprecher, 2002). A second difference between the countries was that, on average, the Canadian sample reported somewhat greater equality of sexual rewards than did the Spanish sample. Again, this difference was not large, accounting for only 3.88% of the variance. Nonetheless, this result is somewhat contradictory because, according to the IEMSS, people with greater sexual satisfaction should also report greater equality of sexual rewards. The results in this study and previous research (Byers et al., 1998; Byers & MacNeil, 2006; LaFrance, 2010; Lawrance & Byers, 1995; Peck et al., 2004; Renaud et al., 1997) could explain this inconsistency. The equality components are not highly correlated with sexual satisfaction and, as such, less equality of sexual rewards is not necessarily related to poorer sexual satisfaction.

Based on the still prevalent endorsement of traditional sexual scripts that privileges male sexuality over female sexuality in Spain (López-Sáez, Morales, & Lisbona, 2008; Santos-Iglesias et al., 2014), we expected men to report greater sexual satisfaction, higher scores on the components of the IEMSS, more sexual rewards, and fewer sexual costs. However, contrary to previous research in Spain and other countries (Ministerio de Sanidad y Política Social, 2009; Petersen & Hyde, 2010), we did not find gender differences on any of these measures. In contrast, Byers and her colleagues (Byers & MacNeil, 2006; Lawrance & Byers, 1995; Renaud et al., 1997) also have shown few gender differences on the IEMSSQ measures. Past findings of gender differences may reflect biases in the instruments used to assess sexual satisfaction. That is, according to Lawrance and Byers (1995), many of the instruments used to measure sexual satisfaction are androcentric in that they focus on the physical intrapersonal aspects of sexual interactions (e.g., frequency of sexual activities, orgasm consistency) and tend to exclude the emotional and relational exchanges (e.g., degree of emotional disclosure). Research using measures that do not have this bias and are centered on the affective responses arising from a subjective evaluation of different dimensions of sexuality (Pascoal, Narciso, & Pereira, 2014), such as the IEMSSQ, has not found differences in men's and women's sexual satisfaction and their sexual exchanges (i.e., sexual rewards and sexual costs). This happens even in countries that adhere to a traditional sexual script such as Spain (and China, as found by Renaud et al., 1997). Alternatively, it could be that gender roles are changing in Spain such that younger people no longer endorse traditional roles and/or sexual attitudes. In keeping with this, Castellanos-Torres et al. (2013) found a similar percentage of sexually satisfied men and women under 44 years old. However, more men than women over 45, and especially over 65, reported being sexually satisfied. Similarly, more women than men over 51 years old reported problems with their sexual satisfaction (Sierra et al., 2012).

Conclusion

These results add to our understanding of sexual satisfaction in Spain and provide further evidence of the strong psychometric properties of the IEMSSQ (see Lawrance et al., 2011). However, there are some limitations to the current study. First, participants were selected using a convenience sampling procedure and have some characteristics (e.g., high educational level, young, heterosexual) that make generalization of the results to the general Spanish population uncertain. Second, on average participants were highly sexually satisfied. Thus, research is needed examining

the psychometric properties of the IEMSSQ in samples that include more individuals with low sexual satisfaction. Research is also needed that establishes the divergent validity of the Spanish IEMSSQ as well as its discriminant validity (e.g., comparing community and clinical samples). Nonetheless, the results of this study demonstrate that the Spanish IEMSSQ is a reliable and valid instrument. As such, the Spanish IEMSSQ can be useful to researchers aiming to further our understanding of both the sexual satisfaction and factors affecting the sexual satisfaction of Spanish-speaking populations. It can also be useful to clinicians working to help their Spanish-speaking clients enhance their sexual satisfaction by providing a mechanism to evaluate specific factors contributing to the couple's low sexual satisfaction (Byers, 1999).

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ESTUDIO 3

Sexual Satisfaction in a Heterosexual and Homosexual Spanish Sample: the Role of Socio-Demographic Characteristics, Health Indicators, and Relational Factors

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Sexual Satisfaction in a Heterosexual and Homosexual Spanish Sample: the Role of Socio-Demographic Characteristics, Health Indicators, and Relational Factors

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Abstract

The aim of the present study was to explore the relationship between (1) sexual satisfaction and (2) socio-demographic variables, health status, and relational factors in Spanish men and women. Using a quota sampling method, we assessed 2,024 subjects aged between 18 and 80 years old with a socio-demographic questionnaire, the Global Measure of Sexual Satisfaction, the Global Measure of Relationship Satisfaction, the Short Form-36 Health Survey, and, the Symptom Assessment-45 Questionnaire. Regarding the results, no significant differences in sexual satisfaction were found according to gender or sexual orientation. At the bivariate level, sexual satisfaction was negatively correlated with age, low education level, psychopathological symptoms, and length of relationship, and positively correlated with better physical health and relationship satisfaction. In heterosexual individuals, 55% of the variance in sexual satisfaction was predicted by vitality, depression, relationship satisfaction, length of relationship, and type of relationship. In homosexual individuals, bodily pain and relationship satisfaction predicted 44% of the variance in sexual satisfaction. Finally, the impact of health and relational variables on the sexual well-being of adults in the context of sex therapy is discussed.

Keywords: sexual satisfaction, relationships satisfaction, physical and psychological health.

Sexual Satisfaction in a Heterosexual and Homosexual Spanish Sample: the Role of Socio-Demographic Characteristics, Health Indicators, and Relational Factors

Sexual health is not just the absence of disease or dysfunction but rather a state of physical, mental, and social well-being related to sexuality. Therefore, sexual satisfaction is a key factor of sexual health that is regarded as a right by the World Health Organization (2010) and as a predictor of quality of life (Robinson & Molzahn, 2007). Sexual satisfaction has been associated with several variables: demographic characteristics (e.g., gender, age, sexual orientation, education level, number of sexual partners), individual variables (e.g., physical and psychological health status), and relational variables (e.g., satisfaction with the relationship, length and type of relationship) (Sánchez-Fuentes, Santos-Iglesias, & Sierra, 2014).

Regarding the role of gender, research has yielded contradictory results. Some studies have found that men report greater sexual satisfaction than women (Carpenter, Nathanson, & Kim, 2009; Petersen & Hyde, 2010); others have concluded that women are more sexually satisfied (Ojanlatva, Helenius, Rautava, Ahvenainen, & Koskenvuo, 2003; Rehman, Rellini, & Fallis, 2011); finally, some studies have not found any gender differences in sexual satisfaction (Neto, 2012; Purdon & Holdaway, 2006). In Spain, a survey conducted by the Ministry of Health revealed that 42.3% of men and 37.7% of women were very satisfied with their sexual relationships (Ministerio de Sanidad y Política Social, 2009). Along the same lines, Santos-Iglesias et al. (2009) found that men and women were equally satisfied with their sexual relationships. A possible explanation to the discrepancies between studies may be that men and women do not differ in the level of sexual satisfaction but rather in the types of sexual behavior that are most satisfactory to them. Some studies have revealed that physical factors are more important for men, whereas emotional aspects are more important for women (Lawrance & Byers, 1995; Sánchez-Fuentes & Santos-Iglesias, in press).

As regards age, overall, studies have shown that it has a negative effect on sexual satisfaction (Chao et al., 2011; De Ryck, Van Laeken, Nöstlinger, Platteau, & Colebunders, 2012; Koç & Saglam, 2013; Træen & Schaller, 2010).

In terms of sexual orientation, few studies have explored samples composed of both heterosexual and homosexual individuals. Although sexual orientation does not

seem to influence sexual satisfaction (Holmberg & Blair, 2009; Kurdek, 1991; Kuyper & Vanwesenbeeck, 2011; Matthews, Tartaro, & Hughes, 2002; McClelland, 2011), some studies have obtained results that suggest the opposite (Gil, 2007; Henderson, Lehavot, & Simoni, 2009).

Finally, higher education level is often associated with greater sexual satisfaction (Barrientos & Páez, 2006; Carpenter et al., 2009).

Both physical health and psychological health have been associated with sexual satisfaction. Good physical and social functioning, few limitations due to physical and psychological health problems, less bodily pain, greater vitality, better overall health, and good mental health have been associated with increased sexual satisfaction in women (McCall-Hosenfeld et al., 2008). Similarly, good physical health status has been associated with higher sexual satisfaction in both men and women (King et al., 2011). Psychological disorders such as depression, anxiety, and stress have been associated with decreased sexual satisfaction (De Ryck et al., 2012; Mosack et al., 2011), while vitality and psychological well-being have been found to predict greater sexual satisfaction (Davison, Bell, LaChina, Holden, & Davis, 2009; Dundon & Rellini, 2010).

Without a doubt, aspects concerning relationships are critical in the analysis of sexual satisfaction. One of the most important variables is relationship satisfaction. Many studies have concluded that high relationship satisfaction predicts higher levels of sexual satisfaction (Byers 2005; Henderson et al., 2009; Rainer & Smith, 2012). As for the type of relationship, results suggest that sexual satisfaction is higher in people who are married or cohabit with a partner (Hansen, Moum, & Shapiro, 2007; Lau, Kim, & Tsui, 2005; Træen & Schaller, 2010). The number of sexual partners in individuals' lifetime has also been associated with the level of sexual satisfaction; overall, a greater number of sexual partners are related to lower sexual satisfaction (Heiman et al., 2011). Finally, the length of relationship has also been associated with sexual satisfaction; a longer duration of relationship is often associated with lower sexual satisfaction (Bridges & Horne, 2007; Rainer & Smith, 2012; Stewart & Szymanski, 2012; Træen & Schaller, 2010).

Most studies on sexual satisfaction have not jointly explored the influence of socio-demographic, individual, or relational variables on sexual satisfaction, and those that have done so have focused exclusively on heterosexual subjects (Carpenter et al, 2009; Heiman et al., 2011) or older individuals (DeLamater, Hyde, & Fong, 2008).

Moreover, health has typically been assessed using a single question or instrument to assess depressive symptoms as a measure of mental health (DeLamater et al., 2008).

Few studies on sexual satisfaction have been conducted in Spain (see Sánchez-Fuentes et al., 2014). Existing studies undertaken in Spain have utilized instruments that have been criticized, such as multi-item scales (Santos-Iglesias et al., 2009) or one single item (Castellanos-Torres, Alvarez-Dardet, Ruiz-Muñoz, & Pérez, 2013; Ruiz-Muñoz et al., 2013) to assess overall sexual satisfaction. These instruments are not based on a conceptual definition and included items simultaneously used as predictors of sexual satisfaction (Lawrance & Byers, 1995; Stulhofer, Busko, & Brouillard, 2010).

Arguably, the instrument with the best psychometric properties that overcomes the limitations of other questionnaires (Lawrance & Byers, 1995; Mark, Herbenick, Fortenberry, Sanders, & Reece, 2014) is the Global Measure of Sexual Satisfaction (GMSEX; Lawrance & Byers, 1995). This questionnaire was developed based on the Interpersonal Exchange Model of Sexual Satisfaction (IEMSS; Lawrance & Byers, 1995) and provides a one-dimensional assessment of sexual satisfaction.

Given all of the above, the main aim of the present study was to analyze sexual satisfaction in a Spanish sample using the GMSEX and explore the relationship between (1) socio-demographic variables, health factors, and relational variables, and (2) sexual satisfaction. Specific objectives of the study were to (1) explore whether there are gender differences within heterosexual and homosexual samples; (2) determine whether there are differences in levels of sexual satisfaction between heterosexual and homosexual participants; and (3) explore possible changes in sexual satisfaction according to socio-demographic variables (i.e., gender, sexual orientation, age, and education level), indicators of physical and mental health, and relational variables (i.e., relationship satisfaction, type of relationship, number of sexual partners, and length of relationship).

In line with these objectives, we proposed the following hypotheses:

- Men will report greater sexual satisfaction than women (Petersen & Hyde, 2010).
- Levels of sexual satisfaction will be similar among heterosexual and homosexual participants (Kuyper & Vanwesenbeeck, 2011).
- Older age (Chao et al., 2011) and greater length of relationship (Træen & Schaller, 2010) will be associated with lower sexual satisfaction.

- Better state of physical and psychological health will be associated with greater sexual satisfaction (Dundon & Rellini, 2010; Heiman et al., 2011; King et al., 2011).
- Greater relationship satisfaction will be associated with greater sexual satisfaction (Byers 2005; Henderson et al., 2009).

Method

Participants

Participants aged 55 years or older completed the assessment instruments using a traditional procedure (i.e., pen and paper), while participants aged between 18 and 54 years completed the questionnaires online. The sample was selected using a non-probability quota sampling method, dividing the population into subgroups according to age (18-30, 31-54, and 55 or older), gender (men and women), and sexual orientation (heterosexual and homosexual). Importantly, participants aged 55 years or older were users of public community centers and associations where various workshops were taught (e.g., painting, computer training, gymnastics, dancing, singing). Users of two associations aimed at the lesbian, gay, bisexual, and transgender community also participated in this study. Such associations organized educational workshops on sexual orientation. Although the users of the above-mentioned centers and associations were older, they were healthy overall and had a varied education level.

The sample consisted of 2,680 participants, of which 656 were eliminated for leaving 25% or more of the items unanswered, having outlier ratings, or not meeting the inclusion criteria (i.e., being at least 18 years old, having Spanish citizenship, being involved in a sexually active heterosexual or homosexual relationship for at least six months at the time of the study, and not having sexual dysfunctions). Thus, the final sample was composed of 2,024 participants (50.1% men and 49.9% women), of which 1,877 (92.7%) were heterosexual and 147 (7.3%) were homosexual. The average length of relationship was 13.76 years (SD = 13.83; range .50-62) and 4.69 years (SD = 5.23; range .50-30) for heterosexuals and homosexuals respectively, and this difference in the length of relationship was statistically significant, t (342.18) = 16.90, p = .001. The age distribution, education level, and type of relationship are shown in Table 1. The average

age of the first sexual intercourse was 18.30 years (*SD* = 2.84) for heterosexual men and 18.51 years (*SD* = 2.80) for heterosexual women, with no statistically significant differences (t (1826) = -1.60, p = .11). Among homosexual individuals, the average age of the first intercourse was 17.15 (*SD* = 2.70) for gay men and 17.98 years (*SD* = 3.11) for lesbian women, with no statistically significant differences (t (145) = -1.73, p = .09). According to median values, heterosexual men had sex with three different sexual partners and heterosexual women had sex with two sexual partners, with significant differences (t (1091.53) = 4.52, $p \leq .001$); gay men reported having had sex with 10 partners and lesbians reported having had 3 sexual partners, also with significant differences (t (88.91) = 4.07, $p \leq .001$). Finally, in order to explore whether sexual satisfaction differ depending on sexual orientation, we randomly selected a percentage of heterosexual participants (n = 186), who were matched to the homosexual sample in gender and age, with no statistically significant differences in the percentage of men and women (χ^2 (1) = 3.37, p = .07) and mean of age (t (266.60 = -1.13, p = .26).

Table 1

Socio-demographic characteristics of the sample

	Heterosexuals				Homosexuals			
	Men		Women		Men		Women	
Variables	*n*	%	*n*	%	*n*	%	*n*	%
Age								
18-30 years old	345	37.1	404	42.6	47	54.7	43	70.5
31-54 years old	400	43.1	329	34.7	31	36.0	12	19.7
55 years old or more	184	19.8	215	22.7	8	9.3	6	9.8
Educational level								
Uneducated	21	2.3	38	4.0	-	-	1	1.7
Primary education	94	10.1	127	13.4	3	3.5	-	-
Secondary education	282	30.4	206	21.8	14	16.3	12	20.0
University studies	531	57.2	574	60.7	69	80.2	47	78.3
Type of relationship								
Dating	502	54.2	564	59.6	79	91.9	55	90.2
Married	425	45.8	383	40.4	7	8.1	6	9.8

Measures

Background Questionnaire. This measure was used to collect socio-demographic information on gender (man or woman), age, highest education level completed (uneducated, primary education, secondary education, or university studies), partner's age, length of relationship (years and/or months), type of relationship (dating or married), sexual orientation (heterosexual, homosexual, bisexual, or asexual), whether participants engaged in sexual relations with their current partner (yes or not), age of the first sexual experience (oral, anal, or vaginal), number of sexual partners, place of residence, and citizenship. Participants were also asked to indicate whether they were receiving treatment for sexual problems and identify the type of problem and treatment if appropriate (medical, psychological, or medical and psychological treatment).

Global Measure of Sexual Satisfaction. We used the Spanish version of this instrument (GMSEX; Lawrance, Byers, & Cohen, 2011**;** Sánchez-Fuentes, Santos-Iglesias, Byers, & Sierra, in press). This measure assesses sexual satisfaction in the context of a relationship and is composed of five bipolar scales: *very bad-very good*; *very unpleasant-very pleasant*; *very negative-very positive*; *very unsatisfying-very satisfying*; *worthless-very valuable*. Each of these scales includes seven response alternatives, with scores ranging from 5 (low sexual satisfaction) to 35 (high sexual satisfaction). Sánchez-Fuentes et al. (in press) reported adequate psychometric properties for the GMSEX, with internal consistency values of .92 and .93 in men and women, respectively, as well as adequate test-retest reliability and convergent validity. In the present study, Cronbach's alpha was .95.

Global Measure of Relationship Satisfaction. We used the Spanish adaptation of this instrument (GMREL; Lawrance et al., 2011; Sánchez-Fuentes et al., in press). The GMREL assesses satisfaction with the relationship with an identical response format to that of the GMSEX. The Spanish version has an internal consistency reliability of .94 in men and women (Sánchez-Fuentes et al., in press). In the present study, Cronbach's alpha was .95.

Short Form-36 Health Survey. We used the Spanish version of this instrument (SF-36; Alonso, Prieto, & Antó, 1995; Ware & Sherbourne, 1992). This measure is

composed of 36 items that are clustered into eight dimensions: physical functioning, physical role, bodily pain, overall health, vitality, social function, social/emotional role, and mental health. Higher scores indicate better health status. Alonso et al. (1995) reported Cronbach's alpha coefficients greater than .70 in all dimensions, except social function (α = .45). In this study, Cronbach's alpha coefficients ranged between .72 and .87, except for the bodily pain dimension (α = .57).

Symptom Assessment-45 Questionnaire. We used the Spanish adaptation of this questionnaire (SA-45; Davison et al., 1997; Sandín, Valiente, Chorot, Santed, & Lostao, 2008). The SA-45 includes 45 items that assess psychopathological symptoms and are clustered into nine factors: depression, hostility, interpersonal sensitivity, somatization, anxiety, psychoticism, obsession-compulsion, phobic anxiety, and paranoid ideation. Higher scores indicate poorer mental health. This measure has adequate internal consistency reliability, with values greater than .70 in all dimensions except psychoticism (α = .63) and adequate convergent and discriminant validity (Sandin et al., 2008). In the present study, Cronbach's alpha coefficients ranged between .67 and .84 for the different dimensions; the alpha coefficient of the total scale was .95.

Procedure

First, two evaluators specifically trained to conduct the study contacted community centers and associations in southern Spain to explain the purpose of the study and request permission to assess the users of these centers. After obtaining permission, they administered the assessment instruments. The evaluators briefly informed individuals willing to participate about the purpose of the study, the lead researcher, the funding agency, and the inclusion criteria: (1) they must be at least 18 years old, (2) have Spanish citizenship, and (3) be involved in a heterosexual or homosexual relationship for at least six months at the time of the study. Participants were also informed that their participation was completely voluntary and anonymous and that data would only be used for research purposes. Those who chose to participate gave their verbal informed consent. Next, the questionnaires were delivered with an envelope and participants were instructed to return them in the sealed envelope to ensure confidentiality and anonymity. It took approximately 20 minutes to complete the survey. This procedure was used to evaluate individuals aged 55 years or older.

We used an online procedure to assess participants aged between 18 and 54 years. Using *LimeSurvey*, an application used by the University of Granada, we circulated an online version of the questionnaire from October to December 2011. The questionnaire was available at http://test.ugr.es/limesurvey/index.php?sid=33985&lang=es. The link was disseminated through social networking and an advertisement was published in a newspaper, explaining the relevance of the study and inviting individuals to participate if they met the inclusion criteria. The first pages of the survey included an informed consent form including a description of the goal of the study and the inclusion criteria as well as Article 5 of the Spanish Privacy Act (*Ley Orgánica 15/1999 de Protección de Datos de Carácter Personal*), guaranteeing anonymity and confidentiality and use of data for research purposes only.

Results

Both men and women reported high levels of sexual satisfaction. No significant differences were found according to gender among heterosexuals (t (1875) = -1.75, p = .08, Cohen's d = -.08) or homosexuals (t (145) = -1.81, p = .07, Cohen's d = -.30) (see Table 2). Moreover, sexual satisfaction was high in heterosexual and homosexual samples {M = 29.07 (SD = 6.07) and M = 29.86 (SD = 5.11) for heterosexuals and homosexuals, respectively}, and no significant differences were found according to sexual orientation (t (329.66) = -1.28, p = .20, Cohen's d = -.14).

Next, we explored whether levels of sexual satisfaction differed according to age and education level. In the heterosexual sample, we found a significant effect of both variables. Participants aged 18-30 years reported significantly greater satisfaction than those aged 31-54 years or 55 years or more (F (2, 1874) = 28.02, p < .001). We found significant differences according to education level (χ^2 (3) = 25.22, p < .001): sexual satisfaction was significantly higher in participants with university studies than in those who had no education (U = 24494.50, p < .01) or primary education (U = 100195.50, p < .01); we used the Bonferroni correction to correct the increase in Type I error that occurred when we performed six comparisons of the means of four groups. In the

homosexual sample, we found no significant differences in sexual satisfaction depending on age (χ^2 (2) = 4.10, p = .13) or education level (χ^2 (3) = 3.69, p = .30).

Table 2

Levels of sexual satisfaction (range 5-35) as a function of gender, age group, education level and type of relationship

Variables	Heterosexuals				Homosexuals			
	n	*M*	*SD*	$t/F/\chi^2/U$	*n*	*M*	*SD*	$t/F/\chi^2/U$
Gender								
Men	929	27.68	6.58	-1.75	86	29.22	4.73	-1.81
Women	948	28.19	6.15		61	30.75	5.51	
Age								
18-30 years old	749	29.23	5.12	28.03***	90	29.82	5.10	4.10
31-54 years old	729	27.35	7.02		43	29.21	5.46	
55 years old or more	399	26.61	6.81		14	32.07	3.47	
Educational level								
Uneducated	59	26.19	6.05	25.22***	1	19.00	-	3.69
Primary education	221	26.38	6.95		3	28.67	10.97	
Secondary education	488	27.77	6.59		26	30.27	5.71	
University studies	1,105	28.44	6.06		116	29.89	4.78	
Type of relationship								
Dating	1,066	28.97	5.62	8.46***	134	29.90	5.17	775
Married	808	26.56	7.01		13	29.38	4.59	

Note: ***p < .001.

In addition, we analyzed the correlations between the factors derived from the SF-36 and SA-45 scales and sexual satisfaction. In the heterosexual sample, all variables were significantly correlated with sexual satisfaction. Factors referring to quality of life were positively associated with sexual satisfaction, whereas psychopathological symptoms were negatively correlated with sexual satisfaction. In homosexual participants, fewer limitations due to physical problems, less bodily pain,

better mental health, vitality, and good overall health were related to greater sexual satisfaction, while symptoms of depression, interpersonal sensitivity, somatization, anxiety, psychoticism, obsession-compulsion, paranoid ideation, and worse mental health status were correlated with lower sexual satisfaction (see Table 3).

Furthermore, we examined the association between relationship satisfaction, type of relationship, number of sexual partners, and length of relationship and sexual satisfaction. In the heterosexual sample, all the variables except for number of sexual partners were correlated with sexual satisfaction. Greater relationship satisfaction was associated with greater satisfaction, while relationship length was correlated with lower sexual satisfaction (see Table 3). As for the type of relationship (see Table 2), heterosexual participants who had a dating relationship reported greater sexual satisfaction than those who were married (t (1497.56) = 8.46, $p < .001$). In homosexual participants, relationship satisfaction was associated with greater sexual satisfaction, but not with number of sexual partners, length of relationship (see Table 3), or type of relationship (U = 775, p = .51) (see Table 2). The variable that showed the highest correlation with sexual satisfaction was relationship satisfaction (see Table 3) in both heterosexuals (r = .72, $p < .001$) and homosexuals (r = .65, $p < .001$).

Table 3

Summary of bivariate correlations

	Sexual satisfaction	
	Heterosexuals	Homosexuals
Physical function	.21**	.09
Psysical role	.22**	.27**
Bodily pain	.14**	.26**
Overall health	.22**	.24**
Vitality	.30**	.37**
Social function	.28**	.13
Social/emotional role	.22**	.27**
Mental health	.36**	.39**
Depression	-.29**	-.27**
Hostility	-.18**	-.12
Interpersonal sensitivity	-.21**	-.21**
Somatization	-.23**	-.18*
Anxiety	-.22	-0.21*
Psychoticism	-.14**	-.21*
Obsession-compulsion	-.19**	-.30**
Phobic anxiety	-.15**	-.16
Paranoid ideation	-.20**	-.19*
Total SA-45	-.28**	-.24**
Relationship satisfaction	.72**	.65**
Number of sexual partners	.04	-.04
Length of relationship	-.21**	.08

Note: *$p < .05$; *$p < .01$.

Finally, we conducted two hierarchical multiple regression analyses to determine which variables predicted sexual satisfaction (see Table 4). In the heterosexual sample, we introduced age in the first step to control its effect on other predictors. In the second step, we introduced education level recording it as a dummy variable, as well as the eight factors of the SF-36 (i.e., physical function, physical role, bodily pain, overall

health, vitality, social function, social/emotional role, and mental health) and the nine dimensions of the SA-45 (i.e., somatization, obsession-compulsion, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, and psychoticism) and the total score of the scale. In the third step, we included relationship satisfaction, length of relationship, and type of relationship, recording the latter variable as a dummy variable. In the homosexual sample, taking into account the Pearson correlation coefficients obtained previously, in the first step we introduced the health-related variables (i.e., physical role, bodily pain, mental health, vitality, health perception, depression, sensitivity interpersonal, somatization, anxiety, psychoticism, obsession-compulsion, paranoid ideation) and the total score of the SA-45 questionnaire; in the second step, we included relationship satisfaction. The results obtained showed that, in heterosexuals, better mental health (β = .05) and greater vitality (β = .05) predicted greater sexual satisfaction, while depression was associated with decreased satisfaction (β = -.06). Concerning relational variables, greater relationship satisfaction (β = .66) predicted greater sexual satisfaction, while length of relationship (β = -.14) and being married (β = -.05) were associated with lower satisfaction. All these variables predicted 55% of the variance in sexual satisfaction. In homosexuals, lower bodily pain (β = .17) and higher relationship satisfaction (β = .58) predicted greater sexual satisfaction. These variables explained 44% of the variance in sexual satisfaction.

Table 4

Summary of the hierarchical multiple regression model for the heterosexual and homosexual samples

	Model	Variables	R^2	*F*	β	*t*
Heterosexuals	10		.56	230.92***		
		Depression			-.06	-2.51*
		Vitality			.05	2.24*
		GMREL			.67	39.05***
		Length of relationship			-.13	-3.90***
		Being married			-.05	-2.45*
Homosexuals						
	3		.44	37.46***		
		Bodily pain			.17	2.57*
		GMREL			.58	8.35***

Note. GMREL: Relationship satisfaction.

* $p < .05$; ** $p < .01$; *** $p < .001$.

Discussion

Given the lack of studies jointly exploring the relationship between sexual satisfaction and socio-demographic characteristics, health indicators, and relational factors, the overall goal of this study was to analyze the role of these variables in the sexual satisfaction of heterosexual and homosexual individuals. Our results showed that both men and women reported high levels of sexual satisfaction, with no significant differences according to gender among heterosexuals and homosexual participants. No significant differences were observed between heterosexual and homosexual participants either. That is, sexual satisfaction was not found to be influenced by gender or sexual orientation. In the heterosexual sample, older age, low education level, and being married were associated with lower sexual satisfaction. By contrast, these variables were irrelevant for the sexual satisfaction among the homosexual sample. In addition, at the bivariate level and, in general, in both heterosexuals and homosexuals, good physical and psychological health was associated with high sexual satisfaction and relationship satisfaction. Length of relationship was associated with low sexual

satisfaction in heterosexuals. Finally, multivariate analyses revealed that, in heterosexuals, vitality, relationship satisfaction, a shorter relationship length, and having a dating relationship were predictors of greater satisfaction, while depression was associated with decreased sexual satisfaction; in homosexuals, less bodily pain and greater relationship satisfaction predicted high sexual satisfaction.

The high level of sexual satisfaction reported by participants in this study is consistent with the results of another recent study conducted in the Spanish population that concluded that 90% of men and women reported being very or fairly satisfied with their sexual life (Castellanos-Torres et al., 2013; Ruiz-Muñoz et al., 2013). Previous research has suggested that men tend to report higher sexual satisfaction than women (Baumeister, Catanese, & Vohs, 2001; Petersen & Hyde, 2010). However, our results revealed no differences in sexual satisfaction between men and women, so our hypothesis was not supported. This result is probably due to the questionnaire used to assess sexual satisfaction. The GMSEX does not include predictors of satisfaction such as items related to physical aspects of sexual interactions (e.g., frequency of sexual activity) that could lead men to report increased sexual satisfaction; it does not include items related to emotional aspects that could benefit women either (Lawrance & Byers, 1995; Sánchez-Fuentes & Santos-Iglesias, in press). In addition, our results are similar to those of previous studies in which the same measure was used to assess sexual satisfaction and no gender differences were found either (see Byers & MacNeil, 2006; Lawrance & Byers, 1995; Renaud, Byers, & Pan, 1997; Sánchez-Fuentes & Santos-Iglesias, in press; Sánchez-Fuentes et al., in press). Similarly to gender, sexual orientation does not appear to influence sexual satisfaction. In this regard, as in previous studies (Kuyper & Vanwesenbeeck, 2011; McClelland, 2011), we found no differences between heterosexuals and homosexuals. It is important to highlight that Spain is a country with a high acceptance of homosexuality (Pew Research Center, 2013). Social normalization contributes to self-acceptance, thereby facilitating the decrease of internalized homonegativity and consequently increasing sexual satisfaction (Henderson et al, 2009; Kuyper & Vanwesenbeeck, 2011).

Regarding education level, this variable was not significant at the multivariate level. Yet, highly educated heterosexual participants showed greater sexual satisfaction than participants with lower education level, in line with previous research (Barrientos

& Páez, 2006; Koç & Saglam, 2013). However, this variable played a negligible role in the homosexual sample, perhaps because a greater percentage of homosexuals had higher education (97.3% had secondary education and/or university studies) than heterosexuals (85.1% reported having secondary and/or university studies), with statistically significant differences (χ^2 (3) = 27.35, p < .001). Previous research has revealed that homosexual subjects have a higher education level than heterosexuals (Mercer et al., 2004; Turner, Villarroel, Chromy, Eggleston, & Rogers, 2005). Individuals with a higher education level have greater ability to communicate with their intimate partners, which is associated with increased sexual satisfaction (Rainer & Smith, 2012). In addition, individuals with higher education level are likely to be more informed about sexual issues, which in turn is likely to lead them to experience their sexuality more naturally and with less prejudice.

As in previous studies (De Ryck et al., 2012; Træen & Schaller, 2010), older age was associated with lower sexual satisfaction in heterosexuals, although this variable was not significant in predicting sexual satisfaction when other variables were considered. Our result is consistent with the finding reported by Laumann et al. (2006), who conducted a study with a sample of 27,500 people from 29 different countries and concluded that age was not associated with decreased sexual satisfaction once health status was controlled for. Similar results have been obtained in several variables related to sexuality. For example, health problems rather than age itself have been associated with decreased sexual interest (Gott & Hinchliff, 2003), low frequency of sexual activity, and sexual dysfunction (Addis et al., 2006). Consistently, Trompeter, Bettencourt, and Barrett-Connor (2012) reported that age lowered the frequency of intercourse and sexual desire, but not sexual satisfaction.

Regarding health indicators, perceived sexual satisfaction was found to be influenced by depression and vitality (in the heterosexual sample) and bodily pain (in the homosexual sample). Depression has been associated with decreased sexual satisfaction (De Ryck et al., 2012; Field et al., 2013; Mosack et al., 2011). Overall, sadness, focusing on negative aspects, and anhedonia adversely affect sexual health (Ramiro, Teva, Bermúdez, & Buela-Casal, 2013). Depressive symptoms and antidepressants have been associated with decreased frequency of sexual activity and increased sexual dysfunction (Ganong & Larson, 2011; Kennedy & Rizvi, 2009; Marina et al., 2013) and poor communication between partners (Harper & Sandberg, 2009;

Scott, Sandberg, Harper, & Miller, 2012). Furthermore, vitality was positively associated with sexual satisfaction, while bodily pain was negatively correlated with sexual satisfaction. In this regard, McCall-Hosenfeld et al. (2008) found that increased vitality, lower bodily pain, and overall better physical and mental health were more common in women who reported being satisfied with their sexual relationships.

In summary, since vitality can be understood as being synonymous with good physical and psychological health, it is not surprising to find that it has a positive effect on sexual satisfaction. Our results suggest that individual variables related to health status are more important than age or education level in predicting sexual satisfaction in both heterosexuals and homosexuals. However, it is worth noting that the explanatory power of health variables in this study was relatively small due to the characteristics of the sample, which was composed of individuals from the general population, who are supposedly healthy. In addition, regarding the homosexuals assessed, most of them lived in large cities, which is related to lower levels of internalized homonegativity and better health (Fisher, Irwin, & Coleman, 2014). Including a greater number of homosexual participants would have allowed us to analyze the importance of age and health in more detail, as few participants were 55 years old or older.

Similarly to previous studies (Byers, 2005; Henderson et al., 2009; Mark, Milhausen, & Maitland, 2013), relationship satisfaction predicted higher sexual satisfaction in both heterosexuals and homosexuals and was the variable with the greatest predictive weight. Individuals who are satisfied with their relationship tend to report higher levels of intimacy and commitment (Rubin & Campbell, 2012; Warehime & Bass, 2008) and have better communication with their partners on both general and sexual aspects (MacNeil & Byers, 2005, 2009). However, length of relationship is often associated with decreased satisfaction with sexual life in both heterosexuals (Rainer & Smith, 2012; Stewart & Szymansky, 2012; Træen & Schaller, 2010) and homosexuals (Bridges & Horne, 2007). In the homosexual sample assessed, length of relationship was not significant in predicting sexual satisfaction, probably because the average length did not exceed five years, while the average length exceeded 12 years in the heterosexual sample. A possible explanation for these negative effects in the heterosexual sample is that increased length of relationship leads to routine or sexual

boredom, decreasing both intimacy and sexual satisfaction (Carvalheira, Træen, & Štulhofer, 2014).

As regards the type of relationship, being married predicted lower satisfaction in the heterosexual sample. This result is not consistent with previous research (Barrientos & Páez, 2006; Lau et al., 2005). However, although the interaction between length of relationship and being married was not significant, it should be noted that the average length of relationship was significantly higher (t (1161.78) = -41.25, $p < .001$) in married participants (M = 25.15; SD = 12.44) than in those who had a dating relationship (M = 5.13; SD = 6.79). This could explain the fact that the type of relationship was not associated with sexual satisfaction in homosexuals. Finally, according to Warehime and Bass (2008), the level of commitment within the couple may be more important than the type of relationship in predicting sexual satisfaction.

In conclusion, good health and a satisfactory relationship were associated with sexual enjoyment and satisfaction in both heterosexuals and homosexuals. It is important to highlight that sexual satisfaction was similar regardless of gender and sexual orientation. In addition, sexual satisfaction and positive sexuality have been found to predict greater overall well-being and better quality of life (Anderson, 2013; Chao et al., 2011), which indirectly contributes to reducing health care costs (Trudel, Turgeon, & Piché, 2000). Given the importance of sexual satisfaction, two key aspects should be underlined. First, health care professionals should bear in mind that health influences sexuality and therefore that it is essential to talk to patients about the potential problems that may arise in the context of sexual relationships. In addition, information and education are essential to improve sexual health. Second, psychological therapists who provide couples counseling or sex therapy should take into account the importance of individual and relational variables.

Finally, the main limitation of our study is that its results cannot be generalized to the general Spanish population because, despite its large size, the sample was incidental. Participants were highly educated and sexually satisfied, so these results cannot be generalized to the Spanish population. In addition, older participants, who were users of community centers and associations, had good overall health, which may explain the low proportion of the variance in sexual satisfaction explained by health

factors. Further research should be conducted with samples with lower sexual satisfaction and poorer health status than the sample assessed.

An additional limitation is the use of two different survey procedures (i.e., traditional and online). Online surveys make it possible to recruit a greater diversity of participants and are as reliable as traditional paper surveys (Gosling, Vazire, Srivastava, & John, 2004; Kraut, Olson, Banaji, Cohen, & Couper, 2004; Mustanski, 2001). However, we decided to use both procedures because one of the disadvantages of online surveys is the selection bias in the sample, as young people tend to use the Internet more than older people (Wright, 2006). When these two different procedures are used it is recommended to compare the samples (Wright, 2006). Yet, given that participants had significant age differences, it was not possible to compare participants who completed the survey in the traditional format with those who completed the survey online.

A further limitation of this study is related to the assessment of sexual satisfaction: first, we did not include measures that differentiate between physical and emotional sexual satisfaction; second, although we used one of the best questionnaires available to assess sexual satisfaction, the present study was not supported by any theoretical model. Thus, due to the complexity of sexual satisfaction and the few studies conducted in Spain, future research should analyze this construct based on the following theoretical models, which are likely to be very useful to better understand sexual satisfaction: the IEMSS (Lawrance & Byers, 1995) and the ecological model, as in the research conducted by Henderson et al. (2009). Moreover, in order to better understand which variables are related to physical and/or emotional sexual satisfaction, it would be uselful for future studies to include these measures, as Carpenter et al. (2009) did in their study.

Finally, it would also have been interesting to include specific measures of internalized homonegativity or discrimination and prejudice to explore their effects on sexual satisfaction in homosexual participants. Moreover, since this study was conducted in Spain, a country with relatively tolerant attitudes toward sexual diversity, future research should confirm whether sexual satisfaction levels are similar regardless of sexual orientation in countries with lower acceptance of homosexuality. In this regard, Træen, Martinussen, and Vittersø (2009) concluded that quality of life is higher in cultures with a greater acceptance of homosexuality.

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ESTUDIO 4

Sexual Satisfaction in Spanish Heterosexual Couples: Testing the Interpersonal Exchange Model of Sexual Satisfaction

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Sexual Satisfaction in Spanish Heterosexual Couples: Testing the Interpersonal Exchange Model of Sexual Satisfaction

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Abstract

The study of sexual satisfaction in Spain is scarce and has proceeded atheoretically. This study aimed at examining sexual satisfaction in 197 Spanish heterosexual couples based on the Interpersonal Exchange Model of Sexual Satisfaction. Men and women reported equal satisfaction. Men's sexual satisfaction was predicted by their own relationship satisfaction, balance of sexual rewards and costs, and comparison level of sexual rewards and costs. Women's sexual satisfaction was predicted by their own relationship satisfaction, balance of sexual rewards and costs, comparison level of sexual rewards and costs, equality of sexual costs, and their partner's balance of sexual rewards and costs. These results provide with a better understanding of the mechanisms that explain sexual satisfaction in Spanish couples. Implications for research and therapy are discussed.

Keywords: sexual satisfaction, Interpersonal Exchange Model of Sexual Satisfaction, Actor-Partner Interdependence Model, Couples, Gender.

Sexual Satisfaction in Spanish Heterosexual Couples: Testing the Interpersonal Exchange Model of Sexual Satisfaction

Sexual satisfaction is an important component in daily life since it is associated with positive outcomes, such as enhanced relationship satisfaction (Holmberg, Blair, & Philips, 2010), physical and psychological health (Laumann et al., 2006; Tower & Krasner, 2006), and overall well-being and quality of life (Byers & Rehman, 2014; Stephenson & Meston, 2011; Thompson et al., 2011). The Interpersonal Exchange Model of Sexual Satisfaction (IEMSS; Lawrance & Byers, 1992, 1995) was created within the context of the Social Exchange Theory (Thibaut & Kelley, 1959). This model provides an effective conceptual framework for understanding and explaining sexual satisfaction within relationships (Byers & Rehman, 2014; Peck, Shaffer, & Williamson, 2005), as it focuses on a series of theory-driven interpersonal sexual and nonsexual variables that have been shown to account for more than 70% of the variance in sexual satisfaction, and it is robust to the effects of gender, child status, length of the relationship, and self-diclosure (Byers & MacNeil, 2006; Byers & Rehman, 2014; Lawrance & Byers, 1995). It also has the advantage of overcoming the methodological limitations in previous research (Lawrance & Byers, 1995; Mark, Herbenick, Fortenberry, Sanders, & Reece, 2014), such as the predictor-criterion overlap (i.e., a measure assesses constructs that are predicted or are predictors of sexual satisfaction; Mark et al., 2014) or the unknown psychometric properties of the measures of sexual satisfaction (Lawrance & Byers, 1995). According to the IEMSS, sexual satisfaction is defined as "an affective response arising from one's subjective evaluation of the positive and negative dimensions associated with one's sexual relationships" (Lawrance & Byers, 1995, p. 268). This definition takes both cognitions and affective factors into account. Furthermore, it places sexual satisfaction in the interpersonal context in which sexual activity actually occurs (Byers & Rehman, 2014). In Spain, there has been little research on sexual satisfaction, and existing studies are not theory-based. As a result, very little is known about the sexual satisfaction of the Spanish population or about the factors that contribute to it. In order to further our understanding of the sexual

satisfactino of Spanish couples, the mechanisms that contribute to sexual satisfaction, as well as to extend the evidences of the validity of the IEMSS, the main goal of this study was to analyse the sexual satisfaction of Spanish men and women within the framework of the Interpersonal Exchange Model of Sexual Satisfaction.

The Interpersonal Exchange Model of Sexual Satisfaction

According to the IEMSS (Lawrance & Byers, 1992, 1995), there are four components that explain sexual satisfaction: (a) the balance of sexual rewards and costs in a sexual relationship (REW-CST); (b) how these rewards and costs compare to the expected levels of rewards and costs, named comparison level (CL_{REW}-CL_{CST}); (c) the perceived equality of sexual rewards and sexual costs between partners (EQ_{REW}, EQ_{CST}); (d) the quality of the non-sexual aspects of the relationship. As posited by the IEMSS, sexual satisfaction progressively grows as (i) sexual rewards exceed sexual costs; (ii) actual sexual rewards exceed the expected level of sexual costs; (iii) one partner's level of sexual rewards and costs equals that of the other partner; and (iv) satisfaction with the nonsexual aspects of the relationship is high (Byers, Demmons, & Lawrance, 1998; Byers & MacNeil, 2006; Lawrance & Byers, 1995; Renaud, Byers, & Pan, 1997).

Research has demonstrated the validity of the IEMSS in different population samples such as individuals in long-term relationships (Byers & MacNeil, 2006; Lawrance & Byers, 1995) and dating relationships from Canada (Byers et al., 1998), dating relationships in the USA (La France, 2010; Peck et al., 2005), and married individuals in China (Renaud et al., 1997). Nevertheless, there is still a major concern regarding the validity of this model. More specifically, even though the IEMSS conceptualizes sexual satisfaction as an interpersonal process, most of the studies conducted have targeted individuals instead of couples. In fact, only Byers & MacNeil (2006) used a sample of 104 couples. Regarding individual effects, their results showed that although all the IEMSS components were correlated to sexual satisfaction at the univariate level, only the balance of sexual rewards and costs predicted sexual satisfaction in the regression model. In the test for partner effects, it was found that women's sexual satisfaction was correlated to men's balance of sexual rewards and costs as well as with how actual rewards and costs compared to expected levels of rewards and costs. In contrast, men's sexual satisfaction was correlated to all women's IEMSS components. However, for both men and women, only their own balance of

sexual rewards and costs predicted their partner's sexual satisfaction in the regression model. As in previous studies, these results suggested that men's and women's sexual satisfaction is influenced by dyadic factors (see MacNeil & Byers, 2005, 2009; Purnine & Carey, 1997; Rehman, Rellini, & Fallis, 2011) and that the study of sexual satisfaction needs to consider both members of the couple (Byers & MacNeil, 2006; DeLamater & Hyde, 2004). However, Byers and MacNeil (2006) performed two separate hierarchical regressions to analyze dyadic effects. This approach did not take into account the possible interdependence between the scores of partners (i.e., the impact of the emotion, cognition, and behaviour of one partner on those of the other). This, in turn, has the disadvantage of affecting significance tests (Kenny, 1995) and of not permitting the comparison of the effects of different pathways in the model. Therefore, in order to fully understand sexual satisfaction from an interpersonal perspective and to overcome methodological limitations, we used a dyadic analytic approach to analyse the validity of the IEMSS on a sample of Spanish couples (Kenny, Kashy, & Cook, 2006).

Sexual Satisfaction in Spanish Men and Women

There is little research in Spain on sexual satisfaction and the factors contributing to it. The results of available studies indicate that Spanish men and women generally claim to have high levels of sexual satisfaction (Castellanos-Torres, Álvarez-Dardet, Ruiz-Muñoz, & Pérez, 2013; Ruiz-Muñoz et al., 2013; Sierra, Vallejo-Medina, Santos-Iglesias, & Lameiras Fernández, 2012). Similarly, few studies have targeted the impact of gender on sexual satisfaction (Castellanos-Torres et al., 2013; Ministerio de Sanidad y Política Social, 2009; Santos Iglesias et al., 2009), and existing research has obtained divergent results. For example, even though certain studies found that men claimed to be more sexually satisfied than women (Ministerio de Sanidad y Política Social, 2009), others were unable to detect any significant difference between men and women in this regard (Santos Iglesias et al., 2009).

Nevertheless, Sexual Script Theory (McCormick, 1987, 2010) states that men and women differ in their sexual behavior, motivation, cognition, and affect. According to this theory, men are expected to have a great interest in sexual activity, to take the initiative in sexual encounters, to value the physical aspects over the emotional aspects of the relationship, and to actively pursue every potential sexual opportunity. In contrast, women are expected to have few sexual needs, to value the romantic aspects

over the sexual aspects of the relationship, and to place their partner's needs above their own (Byers, 1996; Lawrance, Taylor, & Byers, 1996). Previous research found that men reported greater sexual satisfaction than women (Baumeister, Catanese, & Vohs, 2001; Petersen & Hyde, 2010), which seems to support the gender-based differences in Sexual Script Theory. It is also possible that such differences are more evident in countries with unequal gender roles or in male-centered cultures, such as Spain, because traditionally certain forms of sexual expression, such as sexual pleasure, have been repressed in women (Glick, Lameiras, & Rodríguez-Castro, 2002; López-Sáez, Morales, & Lisbona, 2008). Therefore, it would not be surprising for Spanish men to report greater sexual satisfaction than Spanish women. Furthermore, in keeping with the IEMSS, men would presumably have higher scores for all the components of the model (i.e., relationship satisfaction, REW-CST, CL_{REW}-CL_{CST}, EQ_{REW}, and EQ_{CST}).

Gender differences would be also reflected in the types of sexual exchange that men and women regard as sexual rewards and sexual costs. Consistent with Sexual Script Theory (McCormick, 1987, 2010), Lawrance and Byers (1995) found that women were more likely than men to report sexual rewards reflecting the emotional, relational qualities of the sexual relationship (e.g., *How your partner responds to your sexual advances*). Women also were found to have a greater tendency to report sexual costs reflecting the physical, behavioral aspects of sexual interactions (e.g., *How easily you reach orgasm*). Therefore based on the Sexual Script Theory and previous study (Lawrance & Byers, 1995), we expected that women more often than men, would rate the physical aspects of their sexual relationships as sexual costs and the emotional exchanges as sexual rewards, whereas men more often than women, would report the physical exchanges as sexual rewards and the emotional aspects as sexual costs.

The Present Study

The main goal of this study was to analyze sexual satisfaction in Spanish heterosexual couples within the framework of the IEMSS (Lawrence & Byers, 1992, 1995). Since most research on sexual satisfaction has been conducted in other cultures, and culture has been shown to have significant impact on sexual functioning (Brotto, Chik, Ryder, Gorzalka, & Seal, 2005), research and findings about sexual satisfaction in general, and the IEMSS in particular, cannot be generalized to Spain. Therefore, this study was necessary and timely since the results obtained would lead to a more in-depth knowledge of sexual satisfaction and its contributing factors in Spanish heterosexual couples. Furthermore, they would further confirm the intercultural validity of the

IEMSS, as well as its applicability in countries with unequal gender roles (Byers & Wang, 2004). This is of particular importance since this model has been primarily tested in North America (see Renaud et al., 1997 for exceptions).

We thus analysed the level of sexual satisfaction of Spanish men and women and tested for gender-based differences in sexual and relationship satisfaction. The results were interpreted in terms of the IEMSS components (REW-CST, CL_{REW}-CL_{CST}, EQ_{REW}, and EQ_{CST}), as well as in terms of the specific types of sexual exchanges that men and women conceive as sexual rewards and/or sexual costs. In this regard, our hypotheses were the following:

- Men would report greater sexual and relationship satisfaction, REW-CST, CL_{REW}-CL_{CST}, EQ_{REW}, and EQ_{CST} than women.
- Women would report emotional factors derived from their sexual relationships as sexual rewards (e.g., How your partner responds to your initiation of sexual activity) and physical aspects as sexual costs (e.g., How easy is for you to have an orgasm), and men report physical factors derived from their sexual relationships as rewards (e.g., How easy is for you to have an orgasm).

We also tested the validity of the IEMSS and used a dyadic analysis to account for both actor and partner effects. Based on previous research (Byers et al., 1998; Byers & MacNeil, 2006; Lawrance & Byers, 1995; Renaud et al., 1997), we expected to confirm the following:

- Greater sexual satisfaction (GMSEX) at the bivariate level in both men and women would be associated with: (i) greater relationship satisfaction (GMREL); (ii) more sexual rewards in comparison to sexual costs (REW-CST); (iii) a more favorable comparison between actual and expected sexual rewards and costs (CL_{REW}-CL_{CST}); (iv) more equal levels of sexual rewards and sexual costs (EQ_{REW}, EQ_{CST}).
- Men and women's greater relationship satisfaction, a more favorable balance of sexual rewards to sexual costs (REW-CST), a more favorable comparison level or sexual rewards to costs (CL_{REW}-CL_{CST}), greater equality of sexual rewards and sexual costs (EQ_{REW}, EQ_{CST}) will add uniquely to their own sexual satisfaction.
- Men and women's more favorable sexual rewards to sexual costs (REW-CST) will uniquely add to their partners' sexual satisfaction.

Method

Participants

Two hundred heterosexual couples were recruited using a convenience sampling procedure from the Spanish general population. Because only three couples responded that one of the partners was receiving treatment for sexual problems, we decided to remove these couples, to make the sample more homogeneous. The final sample thus consisted of 197 couples. Their average relationship length was 9.40 years (*SD* = 10.20). Of this sample, 45.20% couples were in an exclusive dating relationship and not living with their partners; 33.80% were married; 18.50% were living with their current partner; and 2.50% reported being in a non-exclusive dating relationship. The male partners ranged in age from 18 to 64 years old (*M* = 32.74, *SD* = 10.88), had had their first sexual contact (oral, vaginal and/or anal intercourse) at 17.54 years old (*SD* = 2.75), and had had an average of 6.32 sexual (oral, vaginal and/or anal) partners (*SD* = 12.68). The female partners ranged in age from 18 to 57 years old (*M* = 30.75, *SD* = 10.62), had had their first sexual relation (oral, vaginal and/or anal intercourse) at 17.49 years old (*SD* = 2.61), and had had an average of 3.77 sexual (oral, vaginal and/or anal intercourse) partners (*SD* = 4.94). Almost half of the male subjects had completed university studies (45.60%); 40.40% had finished secondary school; 12.40% had primary studies; and only 1.60% reported having no studies. The majority of the female subjects had a university degree (58.20%); 32.50% had finished secondary school; and 9.30% had a primary education. Men and women differed in the number of sexual partners (t (374) = 2.58, p = .01) and educational level (χ^2 (3) = 8.56, p = .04).

Measures

Participants were asked to fill out a survey booklet consisting of a background questionnaire and the Spanish version of the Interpersonal Exchange Model of Sexual Satisfaction Questionnaire (IEMSSQ; Lawrance, Byers, & Cohen, 2011), as adapted by Sánchez-Fuentes, Santos-Iglesias, Byers, and Sierra (in press).

Background Questionnaire. This survey collected socio-demographic information regarding gender, age, partner age, length of current relationship, type of relationship (non-exclusive relationship, exclusive relationship, living with current partner, or married), sexual relations with current partner, educational level, age at first sexual relation (oral, vaginal and/or anal intercourse), and number of sexual partners.

Participants were also asked to report whether they were receiving treatment for sexual problems.

Rewards/Costs Checklist. This checklist was composed of 58 items assessing different types of sexual exchange, such as *Level of affection you and your partner express during sexual activities, Frequency of sexual activities,* or *Having sex when you're not in the mood*. In reference to their current sexual relationship, respondents were asked to classify each sexual exchange as a reward, a cost, both a reward and a cost, or neither a reward nor a cost. In this study, an item was considered a reward/cost if the respondent indicated it was a reward/cost and both a reward and a cost.

Exchanges Questionnaire. The Exchanges Questionnaire consisted of six items that assessed the respondents' sexual rewards and costs. Item 1 assessed the overall level of sexual rewards on a 9-point scale ranging from (1) *not at all rewarding* to (9) *extremely rewarding* (REW). Item 2 evaluated the actual level of sexual rewards as compared to the expected level of rewards on a 9-point scale ranging from (1) *much less rewarding in comparison* to (9) *much more rewarding in comparison* (CL_{REW}). Item 3 assessed the respondents' level of rewards in comparison to the level of rewards of their partner on a 9-point scale ranging from (1) *my rewards are much higher* to (9) *my partner's rewards are much higher* (EQ_{REW}). Parallel items (4: CST; 5: CL_{CST}; 6: EQ_{CST}) were used to assess sexual costs.

The overall balance of rewards and costs (REW-CST) was calculated by subtracting item 4 from item 1. The comparison of actual and expected rewards and costs (CL_{REW} - CL_{CST}) was calculated by subtracting item 5 from item 2. In both cases, since the scores ranged from -8 to 8, higher scores represented greater sexual rewards. Finally, the items related to the perceived equality of sexual rewards and sexual costs (EQ_{REW} and EQ_{CST}, respectively) were recoded such that the midpoint of the response scale (i.e., perfect equality) was assigned a score of 4, and the endpoints were assigned a score of 0. Thus, higher scores indicated greater equality between partners. Both the original and the Spanish adaptation showed adequate psychometric properties and good evidence of validity (Byers & MacNeil, 2006; Lawrance & Byers, 1995; Sánchez-Fuentes et al., in press).

Global Measure of Sexual Satisfaction (GMSEX). This measure assessed the subjects' overall satisfaction regarding the sexual relationship with their partner. Respondents rated their sexual satisfaction on five 7-point bipolar scales: *very bad-very*

good; *very unpleasant-very pleasant*; *very negative-very positive*; *very unsatisfying-very satisfying*; *worthless-very valuable*. Scores ranged from 5 to 35, with higher scores indicating greater sexual satisfaction. Both the original questionnaire and the Spanish adaptation had a high internal consistency (> .90), test-retest reliabilities .70 at 18 months, and good evidence of convergent and divergent validity (Byers & MacNeil, 2006; Lawrance & Byers, 1995; Sánchez-Fuentes et al., in press). In our study Cronbach's alpha was .93 for the male subjects and .95 for the female subjects.

Global Measure of Relationship Satisfaction (GMREL). This measure is identical to the GMSEX, but it assesses overall relationship satisfaction. Internal consistency values were also high, with Cronbach's alpha greater than .91, a high test-retest reliability of over .61 at 18 months, and good evidence of convergent validity (Byers & MacNeil, 2006; Lawrance & Byers, 1995; Sánchez-Fuentes et al., in press). In this study Cronbach's alpha values were .97 for male subjects and .95 for female subjects.

Procedure

Participants were recruited through a non-random sampling procedure by two trained graduate students. Couples were approached by evaluators in public venues and were asked to participate in a study of human sexuality and sexual relationships. Evaluators briefly informed them of the objective of the study, the identity of the head researcher, and the research-funding agency. To participate in the study, participants had to meet the following inclusion criteria: (1) age of 18 years or older; (2) fluent in Spanish; (3) involved in a heterosexual relationship lasting at least six months at the time of the study. The couples that met these criteria and who agreed to participate were asked to give their verbal informed consent. They were given two copies of the questionnaire booklet and a stamped envelope for returning them. They were instructed to complete the questionnaire in privacy and separately from their partner.

Results

Sexual Satisfaction in Spanish Men and Women

Gender differences in sexual satisfaction and the IEMSS components were tested by using a MANCOVA. Number of sexual partners and educational level were used as covariates since men and women differed in these two variables. The MANCOVA showed no multivariate effect, F (6, 333) = 1.77, p = .10, ε^2_p = .03, Wilks' lambda = .97. Table 1 shows descriptive statistics for men and women, as well as

univariate *F*'s. Both the men and the women reported the same high levels of sexual and relationship satisfaction, a favorable balance of sexual rewards to costs, and a favorable comparison of actual and expected sexual rewards and costs. They also reported average to high equality of sexual rewards and equality of sexual costs.

Table 1

Mean, standard deviations, range, and univariate F's for GMSEX and the IEMSS components in men and women

	Men		Women			
	M	*SD*	*M*	*SD*	Range	*F*
GMSEX	30.91	5.09	30.51	5.67	5-35	1.60
GMREL	31.26	5.63	31.29	5.24	5-35	0.66
REW-CST	4.55	3.66	4.12	3.56	-8 - +8	3.57
CL_{REW}-CL_{CST}	3.62	3.48	3.43	3.49	-8 - +8	0.78
EQ_{REW}	2.59	1.47	2.78	1.29	0-4	1.45
EQ_{CST}	3.13	1.27	2.97	1.24	0-4	2.74

Note. *N* = 197 men and 197 women. GMSEX: Global Measure of Sexual Satisfaction; GMREL: Global Measure of Relationship Satisfaction; REW-CST: Balance of sexual rewards to costs; CL_{REW}-CL_{CST}: Comparison level of sexual rewards to costs; EQ_{REW}: Equality of sexual rewards; EQ_{CST}: Equality of sexual costs.

Specific Sexual Rewards and Sexual Costs

On average, men reported 43.89 sexual rewards and 11.76 sexual costs, whereas women reported 42.92 sexual rewards and 12.19 sexual costs. We tested whether men and women differed in the number of sexual rewards and sexual costs reported by conducting a 2 (gender) x 2 (type of exchange) mixed ANOVA. Only the effect for type of sexual exchange was significant ($F(1, 392) = 1607.86$, $p < .001$, $\varepsilon^2_p = .80$), indicating that on average both men and women reported more sexual rewards than sexual costs. Neither the effect of gender nor the interaction was statistically significant.

The percentage of men and women reporting each sexual exchange as a sexual

reward and cost is shown in Table 2. Over 90% of the men identified nineteen items as sexual rewards. In the case of women, 90% of them identified 14 sexual exchanges as sexual rewards. In both cases, these exchanges were emotional and relational (e.g., Level of affection you and your partner express during sexual activities; How comfortable you and your partner are with each other) as well as physical and behavioral exchanges (e.g., How much fun you and your partner experience during sexual interactions; Your partner being naked in front of you). Regarding sexual costs, only two of them were identified as sexual costs by more than 50% of both men and women (e.g., Having sex when you are not in the mood; Having sex when your partner is not in the mood).

Table 2

Percentage of men and women reporting each sexual exchange as a sexual reward and cost

Sexual Exchanges	Sexual Rewards				Sexual Costs			
	Men		Women		Men		Women	
	%	Rank	%	Rank	%	Rank	%	Rank
1. Level of affection you and your partner express during sexual activities	98	2	92.9	5	3	57	9.1	46
2. Degree of emotional intimacy (feeling close, sharing feelings)	91.9	12	88.3	18	6.1	53	14.2	35
3. Extent to which you and your partner communicate about sex	77.7	35	77.7	33	21.3	23	22.8	22
4. Variety in sexual activities, locations,	67	44	70.6	40	36	11	37.6	9

times								
5. Extent to which you and your partner use sex toys	42.3	54	37.6	54	39.8	7	38.1	8
6. Sexual activities you and your partner engage in to arouse each other	84.2	26	81.2	30	19.9	25	24.4	18
7. How often you experience orgasm (climax)	93.4	6	85.8	25	9.1	42	15.7	32
8. How often your partner experience orgasm (climax)	83.8	27	91.9	11	**19.8**	**26**	**7.6**	**51**
9. Extent to which you and your partner engage in intimate activities (e.g., talking, cuddling) after sex	83.2	29	79.2	32	**13.7**	**35**	**25.9**	**17**
10. Frequency of sexual activities	70.1	40	70.1	42	40.6	5	38.6	5
11. How much privacy you and your partner have for sex	82.2	30	82.2	29	19.8	27	21.3	24
12. Oral sex: extent to which your partner stimulates you	74.6	36	76.1	36	28.4	17	23.4	21
13. Oral sex: extent to which you stimulate	73.5	38	73.1	38	28.6	16	24.4	19

your partner								
14. Physical sensations from touching, caressing, hugging	92.4	10	95.9	1	10.7	38	3.6	58
15. Feelings of physical discomfort of pain during/after sex	38.1	58	33	56	33.5	14	38.6	6
16. How much fun you and your partner experience during sexual interactions	91.4	15	92.4	7	5.6	54	6.1	54
17. Who initiates sexual activities	70.6	39	73.5	37	24.9	20	24.0	20
18. Extent to which you feel stressed/relaxed during sexual activities	84.3	24	80.1	31	10.7	39	13.8	36
19. Extent to which you and your partner express enjoyment about your sexual interactions	91.9	13	92.4	8	9.6	40	7.1	52
20. Extent to which you and your partner communicate your sexual likes and dislikes to each other	83.8	28	82.7	27	15.2	30	20.3	27
21. Ability/inability to conceive a child	56.9	47	55.1	46	14.2	33	16.3	31
22. Extent to which you	57.4	46	50.8	47	39.1	8	37.1	10

and your partner engage in role-playing or act out fantasies								
23. How you feel about yourself during/after engaging in sexual activities with your partner	92.9	8	91.4	12	6.6	50	8.6	47
24. Extent to which your partner shows consideration for your wants/needs/feelings	85.8	23	83.2	26	14.7	31	19.8	28
25. How your partner treats you (verbally and physically) when you have sex	92.4	11	88.3	19	9.1	43	12.8	38
26. Having sex when you're not in the mood	38.6	56	27.9	58	50.3	2	56.3	1
27. Having sex when your partner is not in the mood	36.5	57	33	57	54.3	1	50.8	2
28. Extent to which you let your guard down with your partner	88.8	20	90.9	13	7.6	46	6.6	53
29. Extent to which your partner lets their guard down with you	87.3	21	86.3	24	9.6	41	12.7	39
30. Method of protection (from	70.1	41	66	43	22.3	22	21.3	25

sexually transmitted infections and/or pregnancy) used by you and your partner								
31. Extent to which you and your partner discuss and use protection (from sexually transmitted diseases and/or pregnancy)	68.5	42	62.4	44	17.8	28	17.8	30
32. How comfortable you and your partner are with each other	94.4	4	95.9	2	6.6	51	5.6	55
33. Extent to which/way in which your partner influences you to engage in sexual activity	78.7	32	76.6	35	20.3	24	22.3	23
34. Extent to which you and your partner argue after engaging in sexual activity	41.6	55	35	55	35.5	13	34.0	13
35. Extent to which you and your partner are/are not sexually exclusive (i.e., have sex only with each other)	84.3	25	90.9	14	7.6	47	5.6	56
36. How much time you and your partner spend engaging in sexual	68	43	71.6	39	37.1	10	32.5	15

activities								
37. How easy is for you to have an orgasm (climax)	**92.9**	**9**	**82.7**	**28**	**8.6**	**44**	**20.8**	**26**
38. How easy is for your partner to have an orgasm (climax)	78.2	33	87.8	22	**23.4**	**21**	**8.6**	**48**
39. Extent to which your sexual relationship with your partner reflects or breaks down stereotypical gender roles (the way women and men are expected to behave sexually)	67	45	57.4	45	14.2	34	19.8	29
40. How your partner responds to your initiation of sexual activity	**78.2**	**34**	**88.8**	**16**	**25.4**	**19**	**12.2**	**41**
41. Being naked in front of your partner	93.9	5	89.8	15	**3.6**	**55**	**11.2**	**44**
42. Your partner being naked in front of you	90.9	17	92.4	9	6.6	52	5.1	57
43. Extent to which your partner talks to other people about your sex life	49.7	49	45.7	49	38.1	9	41.1	3
44. Extent to which you and your partner	45.7	51	38.6	53	45.2	3	41.1	4

read/watch sexually explicit material (e.g., erotic stories, pornographic videos)								
45. Pleasing/trying to please your partner sexually	89.8	18	88.3	20	8.6	45	11.7	43
46. Extent to which sexual interactions with your partner make you feel secure in the relationship	91.9	14	88.8	17	7.6	48	12.2	42
47. Extent to which you get sexually aroused	95.9	3	92.9	6	2.0	58	8.1	50
48. Amount of spontaneity in your sex life	74.5	37	70.6	41	28.1	18	34.0	14
49. Extent of control you feel during/after sexual activity	82.2	31	77.7	34	11.2	37	12.7	40
50. Extent to which you engage in sexual activities that you dislike but your partner enjoys	50.3	48	43.1	51	36	12	38.6	7
51. Extent to which you engage in sexual activities that you enjoy but your partner dislikes	44.2	52	43.7	50	40.6	6	36.5	11

52. Worry that you or your partner will get a sexually transmitted infection from each other	43.1	53	39.1	52	30.5	15	31.5	16
53. How confident you feel in terms of your ability to please your partner sexually	91.4	16	88.3	21	13.7	36	13.7	37
54. Extent to which you and your partner engage in anal sex/anal play	47.4	50	49.7	48	43.9	4	36.0	12
55. Your partner's ability to please you sexually	93.4	7	93.4	4	7.6	49	10.2	45
56. Extent to which you think your partner is physically attracted to/sexually desires you	86.8	22	86.8	23	15.7	29	14.7	34
57. Extent to which you are physically attracted to/sexually desire your partner	99.5	1	93.9	3	3.6	56	8.6	49
58. Extent to which you and your partner are sexually compatible (i.e., well matched in terms of your sexual likes and dislikes)	89.8	19	92.4	10	14.3	32	15.2	33

Note. Percentages in bold were significantly different for men and women at $\alpha = .005$.

We used Chi-square comparisons to examine whether the percentage of men and women reporting each reward and cost differed. Based on the number of comparisons, and to be consistent with Lawrance and Byers (1995), to protect against inflated Type I error, we adopted a conservative alpha level of $p < .005$. Only two sexual exchanges differed as sexual rewards, and six as sexual costs (see Table 3). As predicted, men identified their own ability to reach an orgasm as a sexual reward. On the other hand, they identified their partner's response to their sexual advances and their partner's frequency and ability to reach an orgasm as sexual costs. Women identified their partner's responses to their sexual advances as sexual rewards, while their own ability to reach an orgasm, being naked in front of their partners, and engaging in intimate activities after sex were identified as sexual costs

Table 3

Specific sexual rewards and costs showing differences between men and women

Sexual exchange	Sexual Rewards			Sexual Costs		
	Men	Women	χ^2	Men	Women	χ^2
8. How often your partner experience orgasm (climax)				19.8	7.6	12.36*
9. Extent to which you and your partner engage in intimate activities (e.g., talking, cuddling) after sex				13.7	25.9	9.20*
37. How easy is for you to have an orgasm (climax)	92.9	82.7	9.48*	8.6	20.8	11.64*
38. How easy is for your partner to have an orgasm (climax)				23.4	8.6	15.89*
40. How your partner responds to your initiation of sexual activity	78.2	88.8	8.12*	25.4	12.2	11.24*
41. Being naked in front of your partner				3.6	11.2	8.37*

* $p < .005$.

Testing the IEMSS Model

In order to test whether the data were suitable for dyadic analysis, we first examined the interdependency of men and women scores with Pearson product-moment correlations. As shown in Table 4, values on the positive diagonal showed that men and women sexual satisfaction scores and the IEMSS components were significantly correlated. This result indicates the interdependency of the data and the appropriateness of a dyadic analysis (Cook & Kenny, 2005; Kenny et al., 2006). Correlations above and below the positive diagonal in Table 4 reflect the correlations between sexual satisfaction and the IEMSS components for men and women, respectively. As predicted, the sexual satisfaction of the women was positively associated with the four IEMSS components. In the case of men, only the equality of sexual rewards was not correlated with sexual satisfaction.

Table 4

Correlations among IEMSS variables

			Women			
Men	GMSEX	GMREL	REW-CST	CL_{REW} - CL_{CST}	EQ_{REW}	EQ_{CST}
GMSEX	**.67*****	.80***	.69***	.65***	.27***	.31***
GMREL	.83***	**.77*****	.58***	.55***	.20**	.18*
REW-CST	.63***	.58***	**.64*****	.73***	.29***	.39***
CL_{REW}-CL_{CST}	.59***	.49***	.74***	**.48*****	.26***	.29***
EQ_{REW}	-.02	-.02	.05	-.03	**.32*****	.45***
EQ_{CST}	.23**	.23**	.35***	.17*	.42***	**.24*****

Note. $N = 394$. GMSEX: Global Measure of Sexual Satisfaction; GMREL: Global Measure of Relationship Satisfaction; REW-CST: balance of sexual rewards and costs; CL_{REW}-CL_{CST}: Comparison level of sexual rewards and costs; EQ_{REW}: Equality of sexual rewards; EQ_{CST}: Equality of sexual costs.

* $p < .05$ ** $p < .01$ *** $p < .001$.

According to previous research (Cook & Kenny, 2005; Kenny et al., 2006), interdependent data from distinguishable dyads (i.e., the two dyad members can be distinguished from one another by some variable, such as gender) and mixed variables (i.e., variation exists both within as well as between dyads) are best analyzed with the Actor-Partner Interdependence Model (APIM; see Cook & Kenny, 2005) using a structural equation model. The APIM allows the testing of both actor effects (i.e., a person's outcomes as a function of his/her characteristics) and partner effects (i.e., a person's outcomes as a function of his/her partner's characteristics). The full model thus included all the potential actor and partner effects between men and women's scores (see Figure 1). In other words, men's sexual satisfaction was predicted by both the men and women's IEMSS components, and the same was also true for women. A robust maximum likelihood estimation procedure was used in LISREL 8.51 (Jöreskog & Sörbom, 2001), and model fit was tested with a series of different fit indexes: Comparative Fit Index (CFI), Non-Normed Fit Index (NNFI), and Root Mean Square Error of Approximation (RMSEA). In this context, CFI, and NNFI values above .95 and

RMSEA values below .08 were considered indicators of a good fit (Hu & Bentler, 1999; Wang & Wang, 2012).

Results of the final structural equation model are depicted in Figure 2 (χ^2 = 15.70, p = .01, CFI = .99, NNFI = .95, RMSEA = .09). As can be observed in Figure 2, men reported greater sexual satisfaction when their relationship satisfaction was high, when their sexual rewards exceeded sexual costs, and when the relative level of sexual rewards exceeded the relative level of sexual costs. On the other hand, women reported greater sexual satisfaction when their relationship satisfaction was high, their sexual rewards exceeded sexual costs, their relative sexual rewards exceeded relative sexual costs, and when they perceived equality of costs between them and their partners. A significant partner effect was found for women. More specifically, the more the men's sexual rewards exceeded their sexual costs, the lower was the sexual satisfaction reported by the women. This model accounted for 74% of the variance of men and women's sexual satisfaction.

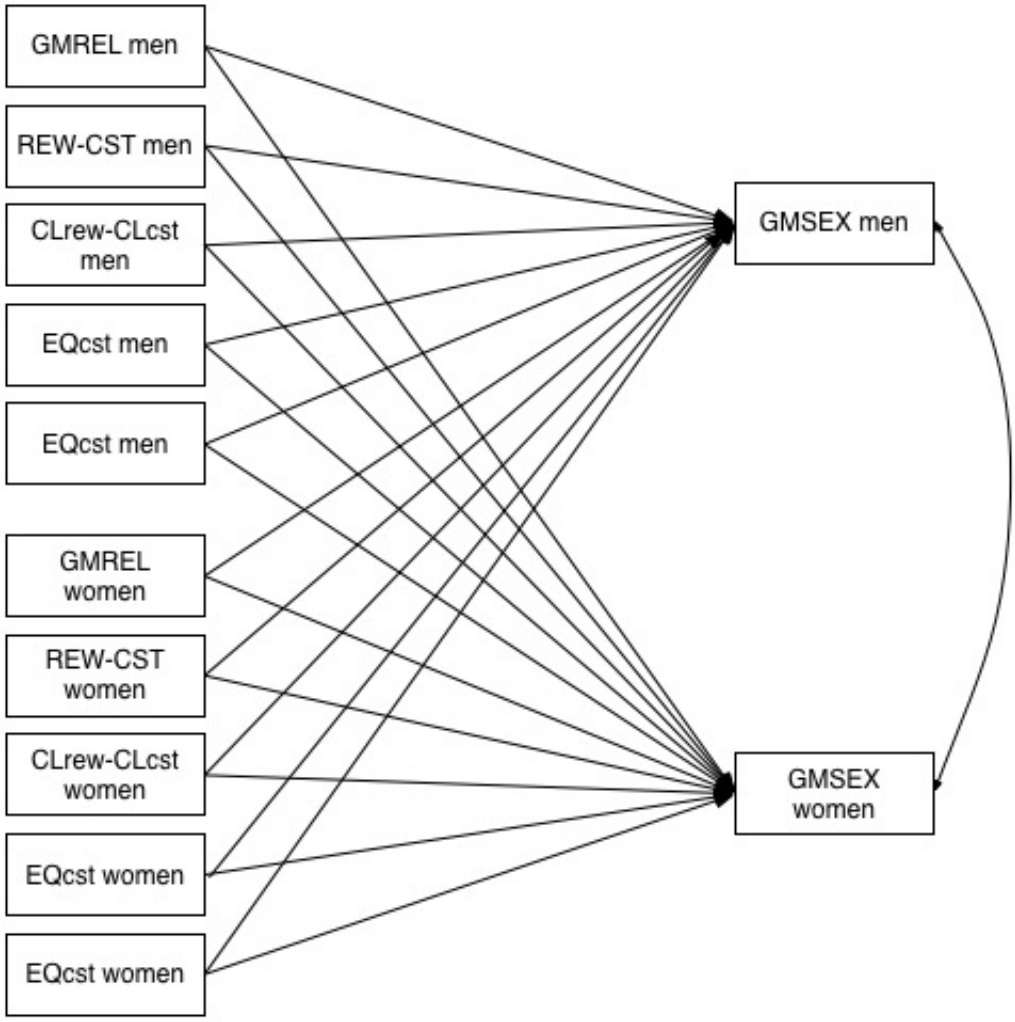

Figure 1

Full model of the IEMSS in couples.

Note. GMSEX: Global Measure of Sexual Satisfaction; GMREL: Global Measure of Relationship Satisfaction; REW-CST: Balance of sexual rewards and costs; CL_{REW}-CL_{CST}: Comparison level of sexual rewards and costs; $EQ_{REW:}$ Equality of sexual rewards; EQ_{CST}: Equality of sexual costs.

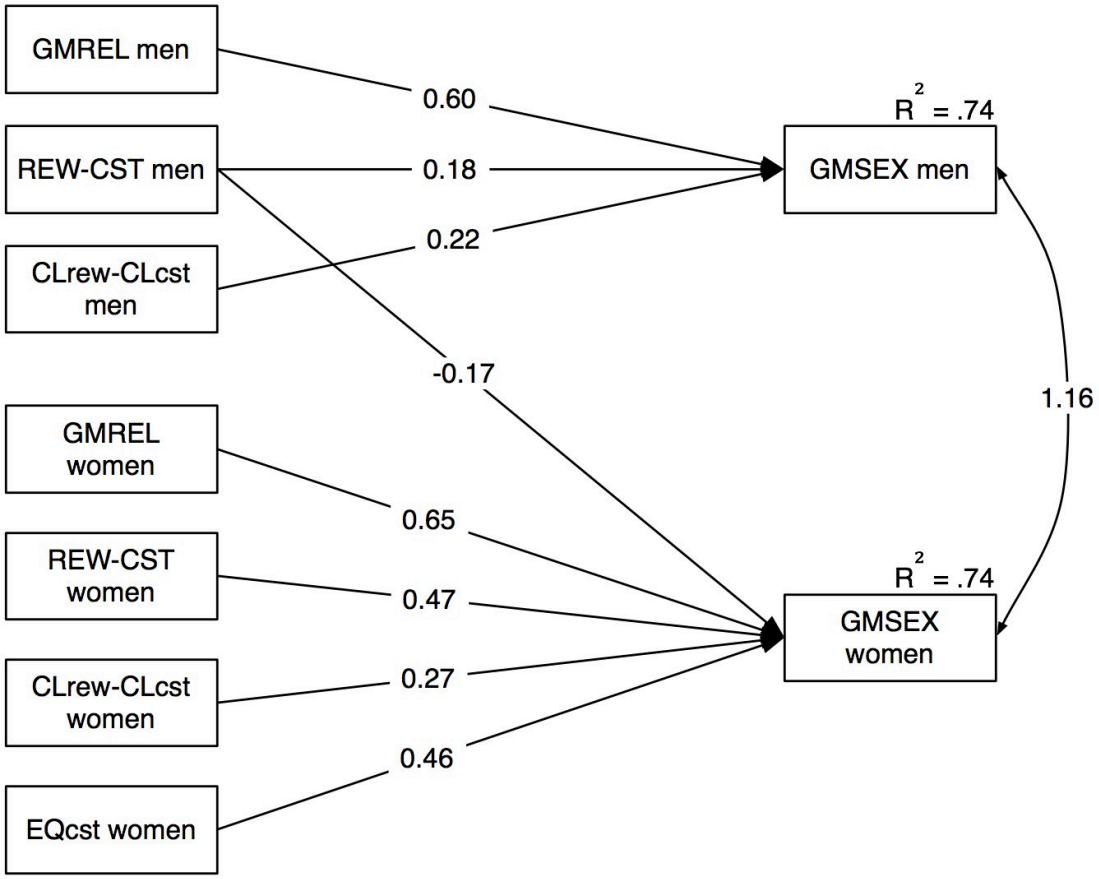

Figure 2

Path diagram of the IEMSS in couples (only significant paths are shown).

Note. GMSEX: Global Measure of Sexual Satisfaction; GMREL: Global Measure of Relationship Satisfaction; REW-CST: Balance of sexual rewards and costs; CL_{REW}-CL_{CST}: Comparison level of sexual rewards and costs; EQ_{CST}: Equality of sexual costs.

Discussion

As previously mentioned, there has been little research in Spain on sexual satisfaction, and existing studies are not theory-based. As a result, very little is known about the sexual satisfaction of the Spanish population or about the factors that contribute to it. The Interpersonal Exchange Model of Sexual Satisfaction (IEMSS; Lawrance & Byers, 1992, 1995) was developed as a model to explain sexual satisfaction, but it has been mainly used in North America (see Lawrance & Byers, 1995; Peck et al., 2005). This study was conducted to further understanding of the

sexual satisfaction of Spanish men and women within the context of the IEMSS framework. The results obtained show that both Spanish men and women are satisfied with their sexual relationships. Furthermore, this study demonstrates that the IEMSS is a valid theoretical framework for the study of sexual satisfaction in Spain. Relationship satisfaction and the history of sexual exchanges both contribute to the prediction of sexual satisfaction.

Sexual Satisfaction in Spanish Men and Women

According to our results, both men and women in our Spanish sample reported high levels of sexual satisfaction, which is in consonance with previous research conducted in Spain (Castellanos-Torres et al., 2013; Sierra et al., 2012) as well as with other studies within the IEMSS framework (Byers & MacNeil, 2006; Lawrance & Byers, 1995; Peck et al., 2005). In keeping with the IEMSS, participants also reported high levels of relationship satisfaction, a favorable balance of sexual rewards to costs, a favorable comparison of sexual rewards to costs, average levels of equality rewards, high perceived of equality cost, as well as a high number of sexual rewards and a low number of sexual costs.

Contrary to our expectations and to previous meta-analytic research (Baumeister et al., 2001; Petersen & Hyde, 2010), we did not find gender differences in sexual and relationship satisfaction or in the IEMSS components. This lack of differences could be attributed to two different reasons. First, previous studies conducted within the IEMSS framework using the Global Measure of Sexual Satisfaction also failed to find significant gender difference in sexual satisfaction (Byers & MacNeil, 2006; Lawrance & Byers, 1995; Renaud et al, 1997; Sánchez-Fuentes et al., in press; Sánchez-Fuentes & Sierra, in press). This suggests that the measurement instrument might play a crucial role here. The conventional multi-item scales often used to assess sexual satisfaction suffer from predictor-criterion overlap (Mark et al., 2014). This occurs when a measure of sexual satisfaction assesses different constructs that predict sexual satisfaction (e.g., orgasm consistency). These multi-item scales often include physical or behavioral constructs related to sexual satisfaction that are especially relevant to men's sexual satisfaction (e.g., sexual frequency, orgasm consistency; see Lawrance & Byers, 1995). Therefore, this could explain why previous research has found that men reported greater sexual satisfaction than women. Second, another possible explanation for the absence of gender differences in sexual satisfaction could be that gender roles are changing in

Spain. It must be noted that the sample in this study was composed mostly of young people, it could be that the traditional sexual script, though still prevalent, had less of an impact on the sexual satisfaction of younger generations in Spain since their sexual attitudes and sexual expression were in the process of changing towards more egalitarian sexual-role attitudes (Laumann et al., 2006; Santos-Iglesias, Vallejo-Medina, & Sierra, 2014). In fact, Castellanos-Torres et al. (2013) found that young Spanish men and women reported the same levels of sexual satisfaction, whereas among the older participants, women reported lower levels of sexual satisfaction than men. However, more research on sexual scripts is needed in Spain to be able to ascertain their influence on sexual attitudes, expression, and function.

In regards to specific sexual rewards and costs, the results obtained partially supported our hypothesis. For example, men reported their ability to reach orgasm as a sexual reward, which would mean that they value physical aspects of their sexual relationships (Lawrance & Byers, 1995). On the other hand, women positively valued emotional aspects such as their partner's responses to their sexual initiations. In contrast, physical aspects, such as being naked in front of their partner and their own ability to reach an orgasm were rated as a sexual cost. While these results support our hypothesis, the differences between men and women were relatively few. Only eight out of the 116 comparisons turned out to be statistically significant, which suggests that, despite differences, Spanish men and women basically report the same specific sexual rewards and costs. This could be explained by the age of the participants. Previous research has demonstrated that young men and women in Spain do not differ in their sexual satisfaction and in their levels of sexual rewards and sexual costs (Sánchez-Fuentes et al., in press) which could be indicating a shift towards more gender egalitarian generation in Spain (Santos-Iglesias et al., 2014). Future research needs to examine this hypothesis. A lack of variability in sexual satisfaction and the overall levels of sexual rewards and sexual costs because of the highly satisfied sample could also explain that lack of differences.

Testing the IEMSS

Our initial results when testing the IEMSS in Spain showed that at the bivariate level (zero-order correlations), all the IEMSS components were related to sexual satisfaction, except for the equality of sexual rewards in men. In line with previous research, this suggests that all components have an important, role in sexual satisfaction

though the equality components have the least impact (Byers et al., 1998; Byers & MacNeil, 2006; Lawrance & Byers, 1995; Renaud et al., 1997; Sánchez-Fuentes et al., in press). According to Byers and MacNeil (2006) the equality components could be more relevant for distressed couples. For this reason, more research with less satisfied individuals is needed to ascertain the exact role of these components. Another possible explanation is that men are still encouraged to pursue their own sexual needs and fulfill their sexual desires (Miller & Byers, 2004), and thus, the equality components would be less relevant for them. Moreover, it was found that the sexual and relationship satisfaction and the IEMSS components of men and women are correlated, which highlights the need to assess both members of the couple when performing sex research (DeLamater & Hyde, 2004).

The examination of the IEMSS using the Actor-Partner Interdependence Model (Cook & Kenny, 2005) reveals that men and women's sexual satisfaction was predicted by their own relationship satisfaction, balance of sexual rewards and costs, and the comparison of actual and expected sexual rewards and costs. These results support previous IEMSS research since it is indicative of the importance of the nonsexual aspects of the relationship and the intertwined relationship between sexual and relationship satisfaction (Mark & Jozkowski, 2013). In addition, a favorable balance of sexual rewards to costs as well as a favorable comparison of actual and expected sexual rewards to costs added to the prediction of sexual satisfaction, found in previous studies (MacNeil & Byers, 2006; Lawrance & Byers, 1995). Because the sample was composed of couples in both a dating and long-term relationship, the nonsexual aspects of the relationship as well as sexual exchanges were found to be relevant in the prediction of sexual satisfaction (see Byers et al., 1998).

However, our study showed two main differences from previous research. In the case of women, the equality of sexual costs predicted sexual satisfaction. Possibly, this is the case because Spanish women feel the need to satisfy their partner's sexual needs (Byers, 1996; Lawrance et al., 1996). This means that they feel less satisfied if they consider that their partner is enduring a greater number of sexual costs or if their own sexual needs are not being satisfied. Finally, there is a partner effect on the women's sexual satisfaction. More specifically, a more favorable balance of the men's sexual rewards to costs results in a lower level of sexual satisfaction in the women. Since men are more instrumental in sexual encounters and since they tend to direct sexual encounters to fulfill their own sexual needs (Miller & Byers, 2004), it is likely that they

will try to increase their number of sexual rewards and minimize their sexual costs. For example, it is possible that they direct sexual interaction towards the achievement of orgasm, an important benchmark in determining men's sexual satisfaction though not women's sexual satisfaction (McClelland, 2011). This result is interesting because of its clinical implications and indicates that the experience of sexual satisfaction is affected by dyadic factors (Byers & MacNeil, 2006; Byers & Wang, 2004; Purnine & Carey, 1997), at least in the case of women (McClelland, 2011).

Limitations and Implications

This study has certain limitations and the results should be interpreted accordingly. Firstly, we used a convenience sample, the characteristics of which (e.g., highly satisfied, well-educated) make it difficult to generalize the results to the entire Spanish population. Secondly, this study also combined couples in dating and long-term relationships and in different stages of the relationship (e.g., non-cohabiting, cohabiting, and married). Since both have an impact on sexual satisfaction (Byers & Rehman, 2014), further research is required to account for the specific effects of these variables separately. Similarly, future research needs to examine the sexual satisfaction of specific populations such as less satisfied individuals, older people, and sexual minorities.

The implications of our study are important. This research adds to the current literature and uses a well-validated theoretical framework to provide further knowledge of sexual satisfaction in Spanish men and women. It is important to understand the mechanisms by which couples become sexually satisfied, because dysfunctional sexual satisfaction has a negative strong impact on marital stability (Keim & Lappin, 2002). The IEMSS has been proposed as a valid framework to be used in therapy with couples (Byers, 1999). It accounts for interpersonal characteristics that have been demonstrated to be important for the treatment and improvement of sexual satisfaction, such as setting realistic sexual expectations about sexual relationships (McCarthy & McDonald, 2009), each partner's preferred sexual behaviours and erotic preferences (McCarthy & Wald, 2012; Metz & McCarthy, 2007), and the non-sexual aspects of the relationship. Accounting for dyadic effects has strong implications for clinical practice as well as for the understanding of the sexuality of couples since therapists need to be aware of the sexual exchanges and the dynamics and behaviors within the couple. Thus our results showed, that at least in the case of women, her sexual satisfaction depended not just on

their own experiences, but also on their partner's sexual experiences (McClelland, 2011).

The results of our study support the validity of the Interpersonal Exchange Model of Sexual Satisfaction (Lawrance & Byers, 1992, 1995) for the understanding of sexual satisfaction in Spanish couples. They also stress the need to assess both members of the couple in order to understand the dynamics that influence sexual satisfaction. This could be highly relevant for the development of effective treatments for the enhancement of sexual well-being, and ultimately the overall quality of life.

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ESTUDIO 5

Use of an Ecological Model to Study Sexual Satisfaction in a Heterosexual Spanish Sample

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Use of an Ecological Model to Study Sexual Satisfaction in a Heterosexual Spanish Sample

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Abstract

Sexual satisfaction is a key factor in sexual health and is associated with quality of life. However, few studies have focused on the factors related to sexual satisfaction in the population in Spain. The main goal of this research was to analyze the predictive capacity of an ecological model for the study of sexual satisfaction in a Spanish sample of 723 men and 851 women in a heterosexual relationship. We analyzed the degree to which sexual satisfaction was related to different variables. These variables were the following: (i) personal variables (depression and sexual attitudes); (ii) interpersonal variables (relationship satisfaction, sexual function, and sexual assertiveness); (iii) social variables (social support, parenthood, and annual income); and (iv) cultural variables (political ideology, religion, and religious practice). In men, sexual satisfaction was directly predicted by relationship satisfaction and sexual function. Furthermore, political ideology, religious practice, social support, annual income, initiation sexual assertiveness, and sexual attitudes were indirectly associated with sexual satisfaction. In women, sexual satisfaction was directly predicted by relationship satisfaction, sexual function, sexual assertiveness, and sexual attitudes. In addition, political ideology, religious practice, and social support were indirectly associated with sexual satisfaction. Implications for research and clinical practice are discussed.

Keywords: sexual satisfaction, men, women, heterosexual, ecological model.

Use of an Ecological Model to Study Sexual Satisfaction in a Heterosexual Spanish Sample

Sexual satisfaction is an essential factor in both human sexuality in general and the lives of individuals in particular. It is an important component of sexual health (World Health Organization, 2010), and is associated with overall wellbeing (Byers & Rehman, 2014). Sexual satisfaction has been defined as "an affective response arising from one's subjective evaluation of the positive and negative dimensions associated with one's sexual relationship" (Lawrance & Byers, 1995, p. 268). However, levels of sexual satisfaction do not only depend on the sexual relationship itself but also on personal variables, factors linked to the relationship, family relationships, and even sociocultural factors (Sánchez-Fuentes, Santos-Iglesias, & Sierra, 2014).

In most research, predictors of sexual satisfaction have been examined in isolation (Sánchez-Fuentes et al., 2014). For this reason, we decided to analyze the joint relationship between sexual satisfaction and other types of variable. Given the large number of factors related to satisfaction, the theoretical framework adopted in this study was the ecological theory of human development (Bronfenbrenner, 1994). This approach had previously been used in Henderson, Lehavot, and Simoni (2009), but was only applied to women.

However, since sexual satisfaction is present in both genders, it would be useful in research and clinical practice to have predictive models that explain sexual satisfaction in men and women. For this reason, we decided to widen our study and consider variables that had not been examined in previous research (Henderson et al., 2009).

Ecological Theory

Ecological theory proposes that human development stems from the interaction between an individual and the environmental contexts with which he/she interacts. This framework is conceived as a set of nested structures with the individual at the center. The characteristics of the individual are the most proximal factors whereas institutional and societal factors are the most distal ones. However, it should be highlighted that all layers of this model are regarded as a series of interrelated and interacting structures, which ultimately lead to human development (Bronfenbrenner, 1994).

The level closest to the individual is the microsystem that includes sociodemographic characteristics, attitudes, and emotions. The next level is the mesosystem, which includes the intimate partner relationship. The third level is the exosystem, composed of two or more settings (e.g. family relationships, social support networks, etc.), at least one of which does not contain the individual, but which may influence the mesosystem and microsystem. Finally, the macrosystem is the most distant level from the individual, and includes cultural and institutional factors such as religious beliefs and political ideology.

Depending on the field of study to which this theory is applied, the four levels may include different variables though the microsystem always refers to the immediate environment of the individual. In contrast, the macrosystem is always the farthest removed environment (Bronfenbrenner, 1994; Henderson et al., 2009).

In this study, the microsystem consisted of sexual attitudes and depression, whereas the mesosystem included relationship satisfaction, sexual functioning, and sexual assertiveness. The exosystem comprised social support, paternity, and socioeconomic status; and finally, the macrosystem included religion, religious practice, and political ideology. According to previous studies, these are some of the predictors of sexual satisfaction (see Sánchez-Fuentes et al., 2014).

Microsystem

Depression, its symptoms, and antidepressant drugs reduce sexual wellbeing. Depressive symptoms have been associated with decreased sexual satisfaction (Field et al., 2013; Pastuszak, Dabhiwala, & Khera, 2013; Sánchez-Fuentes & Sierra, 2015), increased sexual dysfunctions (Basson & Schultz, 2007; Marina et al., 2013; Pastuszak et al., 2013), and low relationship satisfaction (Goldfarb, Trudel, Boyer, & Preville, 2007; Henderson et al., 2009).

On the other hand, sexual attitudes have been defined as a learned disposition to respond to sexual stimuli on a continuum that extends from negative (erotophobia) to positive (erotophilia). More specifically, erotophobic individuals are characterized by their negative attitudes to stimuli or sexual behaviors, whereas erotophilic individuals show more positive attitudes (Fisher, Byrne, White, & Kelley, 1988). Previous studies found a positive relation between erotophilia and sexual satisfaction (Carpenter, Nathanson, & Kim, 2009; Hurlbert, Apt, & Rabehl, 1993). In addition, erotophilic individuals often reported good sexual functioning (del Río, Cabello, & Fernández, 2015; Graham, Sanders, & Milhausen, 2011; Hurlbert et al., 1993; Santos-Iglesias,

Sierra, & Vallejo-Medina, 2013; Vallejo-Medina, Granados, & Sierra, 2014) and high sexual assertiveness (Santos-Iglesias et al., 2013). In contrast, erotophobic people often profess to be Christians and attend religious services more frequently (Diéguez, Diz, Sueiro, & Chas, 2003; Sierra, Ortega, & Gutiérrez-Quintanilla, 2008). They are also more politically conservative (McKelvey, Webb, Baldassar, Robinson, & Riley, 1999; Sierra et al., 2008).

Mesosystem

Relationship characteristics are fundamental in the analysis of sexual satisfaction, especially relationship satisfaction. Numerous studies found that individuals who reported high relationship satisfaction also reported high sexual satisfaction (Byers 2005; Henderson et al., 2009; Mark, Milhausen, & Maitland, 2013; Sánchez-Fuentes & Sierra, 2015). Furthermore, relationship satisfaction appears to act as a mediating variable. For example, Henderson et al. (2009) found that relationship satisfaction mediated the association of sexual satisfaction with social support, sexual functioning, depression, and internalized homophobia in heterosexual, lesbian, and bisexual women.

As is well known, sexual dysfunctions are an important sexual health problem (WHO, 2010). Thus, it is hardly surprising that good sexual performance is a predictor of high sexual satisfaction (Heiman et al., 2011; Hurlbert et al., 1993). In this regard, lack of sexual desire, vaginal dryness, erectile dysfunction, premature ejaculation, inability to reach orgasm, and pain during intercourse have been associated with low sexual satisfaction (Smith et al., 2012).

Sexual assertiveness can be defined as the ability to initiate sexual activity and to refuse unwanted sexual activity. It is also linked to contraceptive use as well as sexually healthy behaviors (Morokoff et al., 1997). Previous research concluded that people with high sexual assertiveness reported greater sexual satisfaction (Haavio-Mannila & Kontula, 1997; Hurlbert et al., 1993; Ménard & Offman, 2009). Sexual assertiveness has also been related to high sexual desire, high arousal, and more numerous orgasms, ultimately with better sexual functioning (Haavio-Mannila & Kontula, 1997; Hurlbert et al., 1993; Santos-Iglesias et al., 2013; van Anders & Dunn, 2009). Consequently, high sexual assertiveness has also been associated with greater relationship satisfaction (Greene & Faulkner, 2005; Morokoff et al., 1997).

Exosystem

Social networks are essential for individual development. In particular, perceived social support has been associated with numerous variables, including sexual health (Ramiro, Teva, Bermúdez, & Buela-Casal, 2013) and sexual satisfaction (Pedersen & Blekesaune, 2003). Moreover, people with high social support tend to show fewer depressive symptoms, greater well-being, and greater relationship satisfaction (Cohen & Wills, 1985; Grav, Hellzèn, Romild, & Stordal, 2012; Henderson et al., 2009).

Parenthood involves a series of changes in an intimate relationship. It is possible that more than parenthood itself, having young children causes a decrease in the sexual satisfaction of men and women (Ahlborg, Dahlöf, & Hallberg, 2005). In any case, after pregnancy, sexual activity tends to diminish, and this may lead to increased sexual dysfunction in women (Ahlborg, Dahlöf, & Strandmark, 2000; von Sydow, 1999).

Low socioeconomic status is also a risk factor for human development. For example, it has been linked to psychopathological disorders, such as depression or anxiety, poor physical health, and thus, a lower quality of life (Lorant et al., 2003). It has also been associated with reduced stability and relationship satisfaction (Amato, Booth, Johnson, & Rogers, 2007; Conger, Conger, & Martin, 2010). Furthermore, research conducted in the Spanish population showed that low socioeconomic status was related to a lower level of sexual satisfaction (Ruiz-Muñoz et al., 2013).

Macrosystem

Most religions only permit sexual relationships within marriage for the purpose of procreation, and disapprove of behaviors whose primary goal is sexual pleasure. Consequently, religious people often have feelings of guilt arising from sexual thoughts and/or sexual behavior (Davidson, Moore, & Ullstrup, 2004). It is thus not surprising that religious people show negative attitudes toward sexuality (Sierra et al., 2008), similar to conservative people (Yang, 1998). Accordingly, recent research concluded that greater satisfaction is predicted by less frequent religious practice (Higgins, Trussell, Moore, & Davidson, 2010) despite the fact that previous studies found that religious practice has no effect on sexual satisfaction (Davidson, Darling, & Norton, 1995). Sexual attitudes may thus function as a mediating variable between religion and sexual satisfaction (Sierra et al., 2008).

Regarding ideology, people with liberal political beliefs showed higher levels of erotophilia, followed by those who identified themselves as moderate, and finally those

with conservative beliefs (del Río-Olvera, López-Vega, & Cabello-Santamaría, 2013; Sierra et al., 2008). Therefore, it is possible that sexual attitudes also act as a mediating factor between political ideology and sexual satisfaction.

The Current Study

In Spain, there have been few studies of sexual satisfaction. With certain exceptions (see Sánchez-Fuentes, Santos-Iglesias, Byers, & Sierra, in press; Sánchez-Fuentes & Santos-Iglesias, in press), such research is usually conducted without recourse to theoretical models (see Castellanos-Torres, Álvarez-Dardet, Ruiz-Muñoz, & Pérez, 2013; Ruiz-Muñoz et al., 2013; Sánchez-Fuentes & Sierra, 2015; Santos Iglesias et al., 2009). With a view to surmounting some of the limitations of previous research, we decided to use the ecological model to study sexual satisfaction in a Spanish sample of heterosexual men and women (Henderson et al., 2009). Specific research objectives included the following:

a) to analyze gender differences.
b) to examine the relationship between sexual satisfaction and variables in the (i) microsystem (depression and sexual attitudes); (ii) mesosystem (relationship satisfaction, sexual functioning, and sexual assertiveness); (iii) exosystem (social support, parenthood, and annual income); (iv) macrosystem (religion, religious practice, and political ideology.
c) to develop a predictive model of sexual satisfaction for both men and women.

Based on previous research, we predicted that in comparison to men, women would report more depressive symptoms (King et al., 2008), more negative sexual attitudes (Santos-Iglesias et al., 2013), poorer sexual functioning (Lewis et al., 2010), less initiation sexual assertiveness, and greater refusal assertiveness (Santos-Iglesias et al., 2013).

It was our belief that depressive symptoms would be associated with low sexual satisfaction, though this relationship would be mediated by relationship satisfaction (Henderson et al., 2009); We also thought that positive sexual attitudes would be related to high sexual satisfaction (Hurlbert et al., 1993) and that high relationship satisfaction would be associated with high sexual satisfaction (Henderson et al., 2009). Similarly, better sexual functioning would be related to high sexual satisfaction (Heiman et al., 2011) as well as to positive sexual attitudes (Santos-Iglesias et al., 2013).

Furthermore, we predicted that high sexual assertiveness would be associated with greater sexual satisfaction (Haavio-Mannila & Kontula, 1997), better sexual functioning (Santos-Iglesias et al., 2013), high relationship satisfaction (Greene & Faulkner, 2005), and positive sexual attitudes (Santos-Iglesias et al., 2013). Social support would be linked to high relationship satisfaction to the extent that relationship satisfaction would act as a mediating variable between social support and sexual satisfaction (Henderson et al., 2009) and low depressive symptomatology (Grav et al., 2012).

It was also our hypothesis that having young children would be associated with poorer sexual functioning (Ahlborg et al., 2005). Sexual function would thus be a mediating variable between the young age of the children and sexual satisfaction.

In regards to economic position, a higher annual income would be indirectly associated with greater sexual satisfaction, with relationship satisfaction acting as a mediating variable (Henderson et al., 2009). A higher annual income would also be related to low depressive symptoms (Lorant et al., 2003).

As for religious beliefs, frequent religious practice (i.e., being Catholic and frequently attending church services) would be associated with negative sexual attitudes (Sierra et al., 2008), which in turn would lead to low sexual satisfaction. Finally, ideologically speaking, liberal political beliefs would be related to more positive sexual attitudes (del Río-Olvera et al., 2013; Sierra et al., 2008), which in turn would be associated with high sexual satisfaction.

Figure 1 shows the general model proposed for men and women.

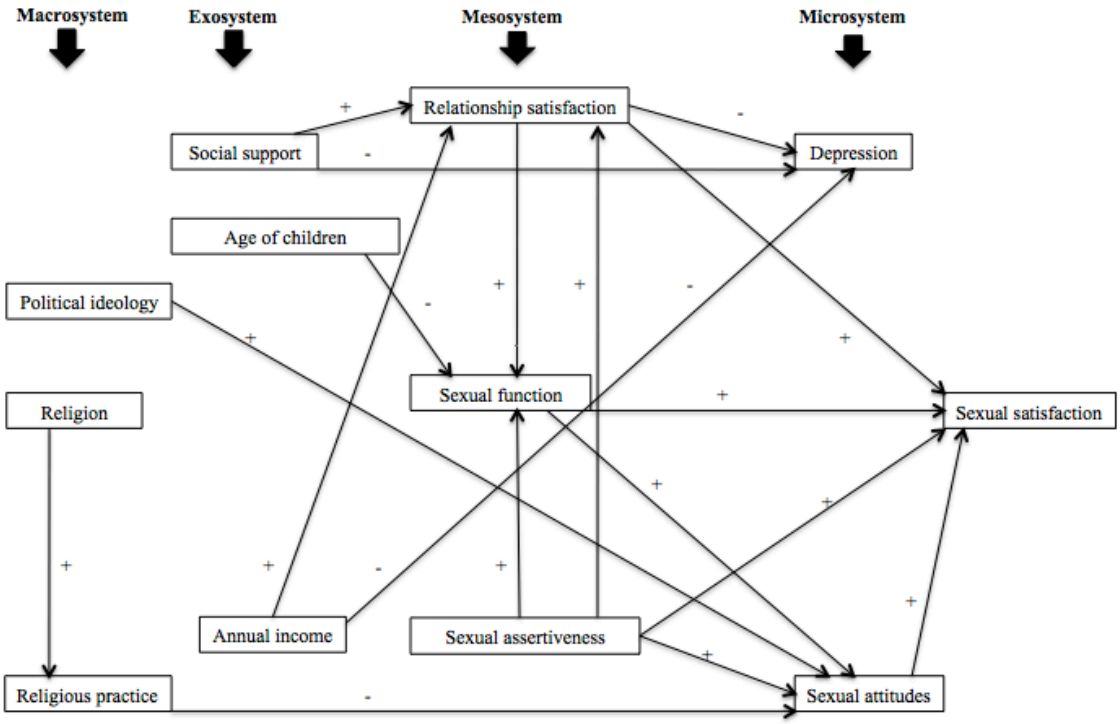

Figure 1

General model proposed for both genders.

Method

Participants and Procedure

The participants in our study were recruited among the Spanish population by means of a non-random sampling procedure. All participants were volunteers and did not receive any compensation for taking part in the study. Respondents between the ages of 18 and 54 answered questionnaires available online. The questionnaires were accessible from March until June 2013. The URL of the questionnaires was distributed by means of social networking and by the news service of the University of Granada (Spain).

The first page of the survey included an informed consent form, which included the identity of the funding organism and of the head researcher. It also explained that the overall objective of the study was to analyze levels of sexual satisfaction and its relationship to different factors. Respondents also had to meet the following inclusion criteria: (1) be 18 years old or older; (2) be involved in a heterosexual relationship of at least 6 months at the time of the study (to guarantee that they were in a committed and

stable relationship); and (3) have Spanish nationality. The informed consent also included Article 5 of the Spanish Law on Protection of Personal Data (*Ley Orgánica 15/1999 de Protección de Datos de Carácter Personal*), which ensures anonymity and confidentiality, and states that the collected data will only be used for research purposes. After the participants had given their consent, then they completed the survey.

Online surveys have the advantage of obtaining a greater diversity of participants. They are also more inexpensive than traditional pen-and-paper surveys and just as reliable (Gosling, Vazire, Srivastava, & John, 2004; Kraut, Olson, Banaji, Cohen, & Couper, 2004). However, one of their limitations is the selection bias in the sample since young people use the Internet more frequently than older people (Wright, 2006). Therefore, in addition to the online surveys, more traditional methods were also used. Subjects of 55 years and older had the option of filling out a paper version of the questionnaire. For this purpose, two trained evaluators contacted social service centers and associations in southern Spain to explain the goal of the study and request permission to survey the users of these centers. After obtaining permission, they administered the questionnaires. In the same way as the online procedure, respondents were first asked to read and sign the informed consent that specified the overall objective of the study and the inclusion criteria. They then received the questionnaire booklet and a stamped envelope.

Although the sample initially consisted of 2,452 subjects, all participants who did not answer one or more of the items or who did not meet the inclusion criteria were eliminated. *Outlier* scores were also discarded. In addition, we did not consider those respondents who had no sexual activity (i.e. oral, anal, and/or vaginal intercourse) with their partner. Most participants identified themselves either as Catholic or without any religious beliefs. For the sake of homogeneity, all respondents who reported another religion were not considered. Moreover, those who said that they were being treated for sexual dysfunctions were eliminated because their number was very low.

Therefore, the sample finally consisted of 1,574 heterosexual participants (45.9% male and 54.1% female) with ages ranging from 18 to 80 (M = 36.28, SD = 12.59). Table 1 shows the socio-demographic characteristics for men and women as well as the gender differences. Regarding gender differences, women tended to have older partners, a lower number of sexual partners, a higher educational level, a lower annual income, and political beliefs that were more liberal than those of the men.

Table 1

Socio-demographic characteristics for men and women

	Men		*Women*		
Variables	*M*	*SD*	*M*	*SD*	*t* test
Age	36.94	13.32	*35.72*	*11.92*	1.91
Age of partner	35.44	12.92	*37.67*	*12.29*	-3.50***
Duration of relationship (years)	11.51	11.74	*11.28*	*11.67*	.38
Age of first sexual relationship	18.10	3.12	*18.11*	*3.08*	-.09
Number of sexual partners	7.36	13.92	*6.09*	*8.47*	2.10*
Number of children	2.00	.81	*2.05*	*.80*	-.84
Age of youngest child	15.18	7.96	*15.04*	*8.47*	.23
	n	*%*	*n*	*%*	χ^2
Type of relationship					.30
Dating	462	63.9	555	65.2	
Married	261	36.1	296	34.8	
With children					3.14
Yes	320	44.3	339	39.8	
No	403	55.7	512	60.2	
Education					55.42***
No education	11	1.5	5	.6	
Primary school	63	8.8	52	6.2	
Secondary school	262	36.6	187	22.2	
University	379	53.0	600	71.1	
Annual Income					23.06***
< €8,000	259	35.8	322	37.8	
€8,000-18,000	195	27.0	288	33.8	
€18,000-40,000	213	29.5	212	24.9	
> €40,000	56	7.7	29	3.4	
Political Ideology					26.91***
Conservative	113	15.6	113	13.3	
Moderate	221	30.6	175	20.6	
Liberal	389	53.8	563	66.2	
Religion					.97
Catholic	332	45.9	412	48.4	
No religious beliefs	391	54.1	439	51.6	

Religious practice					3.50
Everyday	1	.1	4	.5	
Weekly	29	4.0	43	5.1	
Monthly	37	5.1	49	5.8	
Annual	270	37.3	328	38.5	
Never	386	53.4	427	50.2	

* $p < .05$, *** $p < .001$.

Measures

Background Questionnaire. This questionnaire gathered information on gender, age, educational level, annual income, political ideology, religion (Catholic, Islamic, Jewish, Hindu, Buddhist, Other, or No Religious Beliefs) and religious practice, province, country of residence, and nationality. In addition, information was collected in regards to sexual orientation, partner age, length of current relationship, and relationship status. Participants were also asked whether they engaged in sexual relationships with their current partner, age of their first sexual experience (oral, anal, and/or vaginal), and number of sexual partners with whom they had had sexual intercourse (oral, anal and/or vaginal). Participants were requested to report whether they had children, and if so, the number and age of children. Finally, they were also asked whether they were receiving treatment for sexual problems.

Global Measure of Sexual Satisfaction (GMSEX; Lawrance, Byers, & Cohen, 2011). We used the Spanish adaptation (Sánchez-Fuentes et al., in press). This measure assesses overall sexual satisfaction in a relationship. Respondents rate their sexual relationship on the following five 7-point bipolar scales: *very bad-very good; very unpleasant-very pleasant; very negative-very positive; very unsatisfying-very satisfying;* and *worthless-very valuable*. Scores range from 5 to 35 with higher scores indicating greater sexual satisfaction. The measure has good psychometric properties (Lawrance et al., 2011; Sánchez-Fuentes et al., in press). This study had a Cronbach's alpha of .93.

Center for Epidemiologic Studies-Depression (CES-D; Radloff, 1977). We used the Spanish version (Soler et al., 1997). This scale consists of 20 items that assess the frequency of depressive symptoms in the previous week with response options ranging from (0) *rarely or never* to (3) *much or forever*. In addition to a total score, the scale has four dimensions: Depressive Affect, Positive Affect, Irritability/Hopelessness,

and Interpersonal. Scores range from 0 to 60 with higher scores indicating greater depressive symptomatology. The questionnaire has good psychometric properties (Soler et al., 1997). This study had a Cronbach's alpha of .90 for the scale, and which ranged from .41 to .87 for the subscales of Irritability/Hopelessness and Depressive Affect, respectively.

Sexual Opinion Survey (SOS; Fisher et al., 1988). We used the Spanish adaptation (SOS-6; Vallejo-Medina et al., 2014). This survey is composed of six items that assesses the sexual attitudes of erotophilia-erotophobia. Respondents rate their sexual attitudes on six 7-point Likert scales ranging from (1) *totally disagree* to (7) *totally agree*. Scores are 7−42 with higher scores indicating greater erotophilia. This questionnaire showed good psychometric properties (Vallejo-Medina et al., 2014). This study had a Cronbach's alpha of .79.

Global Measure of Relationship Satisfaction (GMREL; Lawrance et al., 2011). We used the Spanish version (Sánchez-Fuentes et al., in press). This measure assesses relationship satisfaction, and it has the same response format as the GMSEX. The scale has excellent psychometric properties (Lawrance et al., 2011; Sánchez-Fuentes et al., in press). This study had a Cronbach's alpha of .94.

Massachusetts General Hospital Sexual Functioning Questionnaire (MGH-SFQ; Fava, Rankin, Alpert, Nierenberg, & Worthington, 1998). We used the Spanish adaptation (Sierra, Vallejo-Medina, Santos-Iglesias, & Lameiras-Fernández, 2012). This questionnaire is composed of five items assessing sexual functioning in different areas during the previous month: interest, arousal, orgasm, erection (only for men), and overall sexual satisfaction. Respondents rate their sexual function on a 5-point Likert scale ranging from (0) *totally absent* to (4) *normal* with higher scores indicating better sexual functioning. In this study, only the items that assess desire, arousal, and orgasm were used. This scale has good psychometric properties (Labbate & Lare, 2001; Sierra et al., 2012). This study had a Cronbach's alpha of .84 for men and .89 for women.

Sexual Assertiveness Scale (SAS; Morokoff et al., 1997). We used the Spanish version (Sierra, Vallejo-Medina, & Santos-Iglesias, 2011). This scale consists of 18 items clustered into the following three factors: Initiation, Refusal, and Use Contraceptive Methods. Initiation refers to the ability to begin sexual activity, whereas refusal refers to the ability to refuse unwanted sexual activity. Participants responded

using a 5-point Likert scale ranging from (0) *never* to (4) *always* with higher scores indicating greater sexual assertiveness. The Spanish version has good psychometric properties (Sierra et al., 2011). This study only used the factors of initiation (α = .75) and refusal (α = .79).

Social Support Scale (*Escala de Apoyo Social*) (EAS; Matud, 1998). This measure consists of 12 items that assess perceived social support. Responses were given on a 4-point Likert scale ranging from (0) *never* to (3) *always* with high scores indicating greater perceived social support. This scale has good psychometric properties (Matud, Ibáñez, Bethencourt, Marrero, & Carballeira, 2003). This study had a Cronbach's alpha of .91.

Data Analysis

Descriptive statistics and gender differences were calculated for all variables included in the study. We also examined the association between sexual satisfaction and the predictor scale variables (depressive symptoms, sexual attitudes, relationship satisfaction, sexual functioning, initiation assertiveness, refusal assertiveness, social support, and age of youngest child) using Pearson correlations for both genders. Only significantly correlated variables were included in a structural equation model that was run separately for men and women. The analyses were performed with SPSS 20.0 and M-Plus 5.1. Because of the inclusion of categorical data in the SEM, the robust weighted least squares was used (Finney & DiStefano, 2006). To assess the fit of the proposed models, a joint assessment of a set of indexes was used (Tanaka, 1993). Values above .90 in the Comparative Fit Index (CFI) and Tucker Lewis Index (TLI), and values below .05 in the Root Mean Square Error of Approximation (RMSEA) were used as indicators of fit (Byrne, 2010).

Results

Descriptive Statistics and Gender Differences

Men and women reported high scores for sexual satisfaction, erotophilia, relationship satisfaction, and sexual function (desire, arousal, orgasm, and erection [only men]). Scores for initiation assertiveness, refusal assertiveness, and social support were moderate, whereas scores for depressive symptoms were low in both men and women. Gender comparisons showed that men scored significantly lower than women in regards to depressive symptoms, depressive affect, irritability/hopelessness, refusal assertiveness, and social support. In addition, men obtained scores that were

significantly higher than women for sexual desire, sexual arousal, and orgasm (see Table 2).

Table 2

Descriptive data of the variables for men and women

	Men		Women			
Variables	*M*	*SD*	*M*	*SD*	Range	*t* test
Sexual satisfaction	28.53	6.27	28.56	6.34	5-35	-.11
Depressive symptoms	13.64	9.33	15.21	10.32	0-60	-3.17**
Depressive affect	7.56	6.15	8.68	6.57	0-33	-3.51***
Positive affect	3.67	2.48	3.63	2.57	0-12	.34
Irritability/Hopelessness	.86	1.07	1.32	1.29	0-6	-7.74***
Interpersonal	1.54	1.83	1.56	1.81	0-9	-.22
Sexual attitudes	36.66	5.80	36.43	6.68	7-42	.73
Relationship satisfaction	29.39	5.52	29.64	5.85	5-35	-.87
Sexual functioning						
Desire	3.47	.95	3.09	1.16	0-4	6.93***
Arousal	3.58	.82	3.18	1.13	0-4	7.79***
Erection	3.66	.77	-	-	0-4	-
Orgasm	3.65	.79	3.22	1.20	0-4	8.35***
Sexual assertiveness						
Initiation	14.24	4.34	14.32	5.19	0-24	-.32
Refusal	9.95	5.34	16.02	5.16	0-24	-22.89***
Social support	26.38	7.56	28.11	7.04	0-36	-4.68***

** $p < .01$, *** $p < .001$.

Bivariate Analysis

All variables were related in the expected direction to sexual satisfaction, except refusal assertiveness in men, and age of youngest child in both men and women. However, age of youngest child was included in the model testing since it was significantly and negatively associated with sexual functioning in both genders.

Testing the Models

For men, age of youngest child was an insignificant indicator of sexual function. It was thus dropped from the model in subsequent analyses. The modification indices reflected that sexual attitudes and initiation assertiveness contributed very little to sexual satisfaction. Furthermore, these indices showed that sexual function mediated the association between sexual attitudes and sexual satisfaction. Finally, the modification indices showed that sexual function contributed to positive affect. Therefore, the models adjusted for factor indicators were tested.

The results of the structural equation model (see Fig. 2) showed that a liberal political ideology (macrosystem variable) predicted erotophilia (microsystem variable). They also showed that being Catholic (macrosystem variable) predicted more frequent religious practice (macrosystem variable), and that more frequent religious practice predicted low erotophilia. Regarding exosystem variables, social support predicted high relationship satisfaction (mesosystem variable) and low depression (microsystem variable). High annual income predicted low relationship satisfaction and depression. In reference to mesosystem variables, relationship satisfaction predicted good sexual function (mesosystem variable), low depression, and high sexual satisfaction. Relationship satisfaction was found to mediate the association between the following pairs of variables: (i) social support and sexual satisfaction; (ii) annual income, and sexual satisfaction; (iii) initiation assertiveness and sexual satisfaction. Moreover, relationship satisfaction mediated the association between sexual function and depression. Sexual function predicted low symptoms of positive affect (microsystem variable) and high sexual satisfaction. In addition, sexual function mediated the association between sexual attitudes and sexual satisfaction. Initiation assertiveness was associated with high relationship satisfaction. Finally, high erotophilia was associated with good sexual function. This model provided a good fit for the data (CFI = .96; TLI = .96; RMSEA = .05), and it accounted for 56.7% of the variance in sexual satisfaction in men.

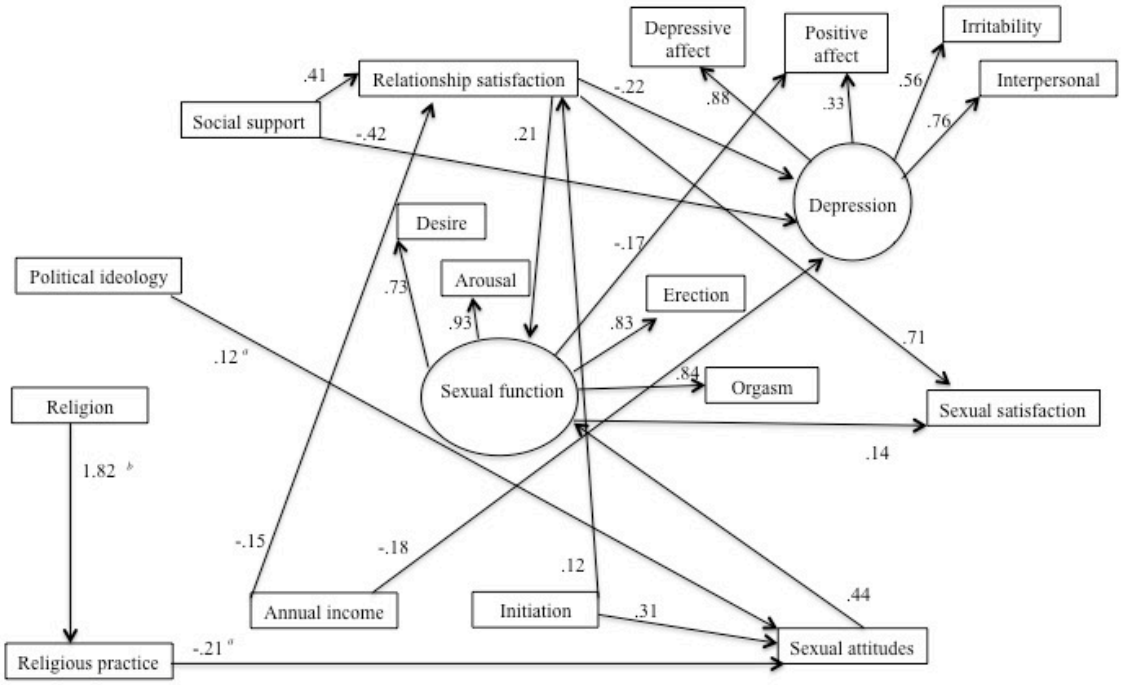

Figure 2

Path diagram of the ecological model of sexual satisfaction in men (n = 723; only significant path are shown).

Note: Standardized coefficient for variables: social support, annual income, relationship satisfaction, sexual function, initiation, depression and sexual attitudes; [a] Standardized coefficient by the standard deviation of the dependent variable for ordinal variables: political ideology and religious practice; and [b] Unstandardized coefficient for the dichotomous variable: religion.

In women, age of youngest child and sexual assertiveness were insignificant indicators for sexual function, and sexual assertiveness and annual income were insignificant indicators of relationship satisfaction. Thus, age of youngest child was dropped from the model, and insignificant indicators were also eliminated in subsequent analyses. In addition, the modification indices reflected that social support contributed to sexual function, and sexual assertiveness to positive affect. Therefore, the models adjusted for factor indicators were tested.

The results of the structural equation model (see Fig. 3) showed that a liberal

political ideology (macrosystem variable) predicted erotophilia (microsystem variable). In addition, being Catholic (macrosystem variable) predicted more frequent religious practice (a macrosystem variable); and finally, more frequent religious practice predicted low erotophilia. Regarding exosystem variables, social support predicted high relationship satisfaction, good sexual function (mesosystem variables), and low depression (microsystem variable). High annual income predicted low depression. Regarding mesosystem variables, relationship satisfaction predicted good sexual function, low depression, and high sexual satisfaction. Relationship satisfaction was found to mediate the association between social support and sexual satisfaction. In the same way as in the model for men, relationship satisfaction mediated the association between sexual function and depression. Sexual function predicted high sexual satisfaction. In addition, sexual function mediated the association between social support and sexual satisfaction. Sexual assertiveness predicted erotophilia, low symptoms of positive affect (microsystem variable), and high sexual satisfaction. The preliminary analysis showed that erotophilia predicted high sexual satisfaction. However when relationship satisfaction, sexual functioning, and sexual assertiveness were added to the model, and when these variables directly and positively predicted sexual satisfaction, then the direct effect of sexual attitudes on sexual satisfaction became negative. This model provided a good fit for the data (CFI = .98; TLI = .98; RMSEA = .04), and accounted for 55.4% of the variance in sexual satisfaction in women.

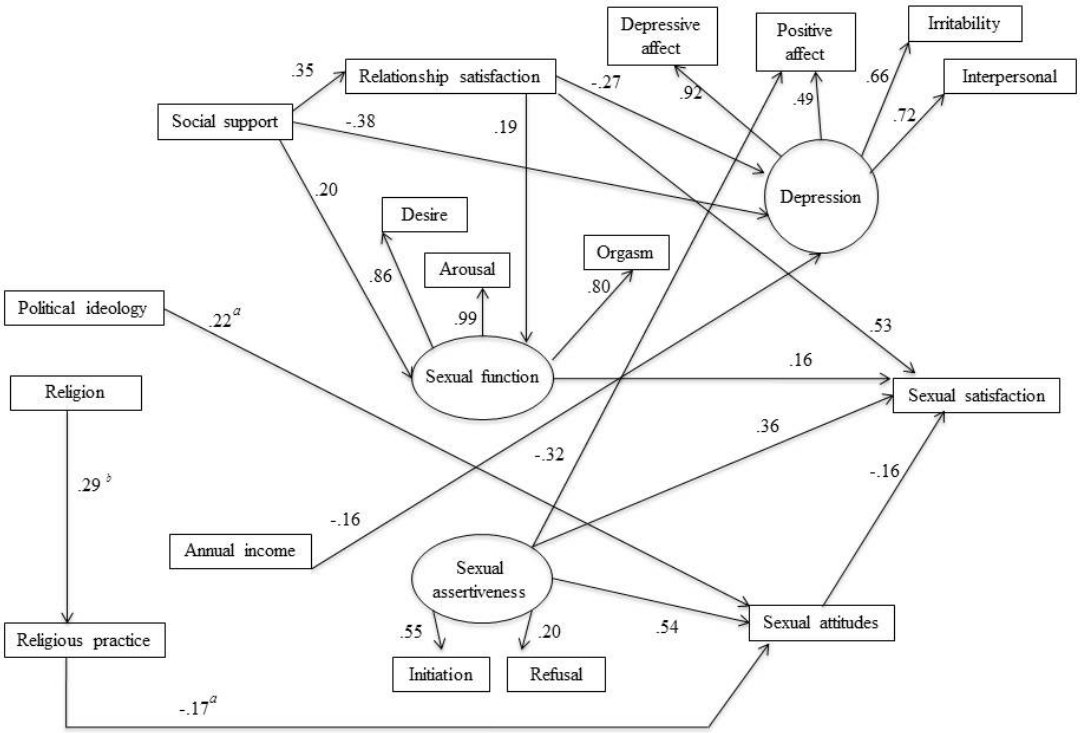

Figure 3

Path diagram of the ecological model of sexual satisfaction in women (n = 851; only significant path are shown).

Note: Standardized coefficient for variables: social support, annual income, relationship satisfaction, sexual function, sexual assertiveness, depression and sexual attitudes; [a]Standardized coefficient by the standard deviation of the dependent variable for ordinal variables: political ideology and religious practice; and [b]Unstandardized coefficient for the dichotomous variable: religion.

Finally, we compared the final models obtained for men and women to determine significant differences in their overall fit. Regarding sexual functioning, erection was eliminated from the model in this comparison because only men were able to answer this item. As for sexual assertiveness, the factors of Initiation and Refusal remained in the model comparison. Although Refusal was not a significant predictor of sexual satisfaction in the model for men, all participants answered these items. Because we used the robust WLS estimator, the chi-square value could not be used for the chi-

square difference test. The model tested provided a good fit for the data in men (CFI = .96, TLI = .95, RMSEA = .05) and in women (CFI = .98, TLI = .98, RMSEA = .04).

In addition, we used the Wald Test of Parameter Constraints to ascertain whether there were significant differences in the paths between factors or whether these paths were identical in both the models for men and women. No significant differences were found in the paths between the following factors: religion and religious practice (Wald Test = .62; *df* = 1; *p* = .43), religious practice and sexual attitudes (Wald Test = .25; *df* = 1; *p* = .62), social support and relationship satisfaction (Wald Test = .01; *df* = 1; *p* = .92), social support and depression (Wald Test = .26; *df* = 1; *p* = .61), annual income and depression (Wald Test = .60; *df* = 1; *p* = .44), relationship satisfaction and sexual function (Wald Test = .49; *df* = 1; *p* = .48), relationship satisfaction and depression (Wald Test = 3.77; *df* = 1; *p* = .06), sexual function and sexual satisfaction (Wald Test = 1.33; *df* = 1; *p* = .25).

In contrast, significant differences were found in the paths between the following factors: ideology political and sexual attitudes (Wald Test = 5.27; *df* = 1; *p* = .02), and relationship satisfaction and sexual satisfaction (Wald Test = 14.23; *df* = 1; *p* < .001).

Discussion

The aim of this study was to analyze sexual satisfaction from the perspective of ecological theory (Bronfenbrenner, 1994; Henderson et al., 2009). We examined the power of microsystem variables (depression and sexual attitudes), mesosystem variables (relationship satisfaction, sexual functioning, and sexual assertiveness), exosystem variables (social support, age of the youngest child, and annual income), and macrosystem variables (religion, religious practice, and political ideology) in regards to sexual satisfaction. Both men and women reported high sexual satisfaction.

All variables except for parenthood were either directly or indirectly associated with sexual satisfaction. Although there were small differences in the final model obtained for men and women, both models showed a good fit. The results are relevant for both research and clinical practice because they clearly demonstrate the complexity of sexual satisfaction.

Macrosystem

As predicted, the macrosystem variables (religion, religious practice, and political ideology) were found to be indirectly associated with sexual satisfaction as

reflected in sexual attitudes. As reported in other research (del Río-Olvera et al., 2013; Sierra et al., 2008), liberal political beliefs and infrequent church attendance were associated with positive sexual attitudes in both men and women.

Exosystem

At the bivariate level, high social support was associated with greater sexual satisfaction. In the final model for men and women, as predicted, based on Henderson et al. (2009), the relationship between social support and sexual satisfaction was mediated by relationship satisfaction. At the multivariate level, high social support was associated with high relationship satisfaction and low depressive symptomatology. Perception of social support was found to play a fundamental role not only in improving marital satisfaction, but also in reducing depression levels. The reason was that social support is associated with stress reduction and increased wellbeing (Cutrona, 1996; Dehle, Larsen, & Landers, 2001; Grav et al., 2012).

Regarding parenthood, at the bivariate level, younger age of children was associated with poorer sexual functioning in men and women. However, in the final model, the age of the youngest child did not predict worse sexual functioning, even in women, as suggested in previous research (Ahlborg et al., 2000). In the predictive models in Henderson et al. (2009), parenthood was not significant for predicting sexual satisfaction. Moreover, future studies should evaluate whether participants had children and what the ages of the children were. They also should study whether measures such as parenthood satisfaction and parent alone time should be included for a more in-depth understanding of parenthood and sexual relationships.

On the other hand, high socioeconomic status was predicted to be associated with greater relationship satisfaction and low depressive symptomatology. The results obtained partially supported our hypothesis. Not unexpectedly, a higher level of annual income predicted low depression in men and women. As is well known, low socioeconomic status is a risk factor for mental health (Lorant et al., 2003; Wang, Schmitz, & Dewa, 2010). However, the association between the level of annual income and relationship satisfaction differed between men and women (see section on gender differences).

Mesosystem

Relationship satisfaction was the variable with the greatest weight that predicted

sexual satisfaction. This agrees with previous research that highlights its importance for directly predicting sexual satisfaction (Byers, 2005; Heiman et al., 2011; Mark & Jozkowski, 2013; Mark et al., 2013; Sánchez-Fuentes & Santos-Iglesias, in press; Sánchez-Fuentes & Sierra, 2015) as well as its mediating role (Bancroft, Loftus, & Long, 2003; Henderson et al., 2009; Rosen et al., 2014). High relationship satisfaction was directly associated with greater sexual satisfaction. In addition, it acted as a mediating variable between social support and sexual satisfaction in both men and women. Nevertheless, there were some differences regarding the role of this variable in the final models for men and women (see section on gender differences).

Sexual function, particularly desire, arousal, erection (in the case of men) and orgasm, was another predictor variable in both models. Better sexual functioning is associated with greater sexual satisfaction. In the same way as in Henderson et al. (2009), it also operated as a mediator variable. However, the mediating role of this variable was different in men and women (see section on gender differences).

Greater sexual assertiveness was associated with more positive sexual attitudes in men and women, which is in consonance with previous research (Hurlbert et al., 1993; Santos-Iglesias et al., 2013; Sierra et al., 2008). Nevertheless, some gender differences were also detected.

Microsystem

Regarding depression, at the bivariate level, the greater frequency of depressive symptoms was associated with lower sexual satisfaction. As in previous research (Henderson et al., 2009), when other variables were included in the final model, the direct relation between depression and sexual satisfaction became insignificant. According to Henderson et al. (2009), the relationship between depression and sexual satisfaction might not have been significant because of the small size of the sample in their study. However, in the larger sample in this study, no significant effect was found. Future research with clinical samples should clarify the predictive power of depression in regards to sexual satisfaction.

Insofar as sexual attitudes, greater erotophilia was associated with increased sexual satisfaction at the bivariate level though in the final models, the results differed according to gender.

Gender-based Differences

Based on the previous literature, we predicted that women would show greater depressive symptomatology (King et al., 2008), greater erotophobia (Fisher et al., 1988;

Santos-Iglesias et al., 2013.), poorer sexual functioning (Lewis et al., 2004; Nicolosi et al., 2004; Sierra et al., 2012), less initiation sexual assertiveness, and greater refusal sexual assertiveness (Santos-Iglesias et al., 2013) than men. To a great extent, this hypothesis was confirmed. Our results showed that women generally showed more depressive symptoms, poorer sexual functioning, greater refusal assertiveness, and higher perceived social support than men. These gender differences highlight the necessity of a predictive model for men and another for women. The final models for each gender were fairly similar despite the fact that some of the paths were different.

Given that financial security has been associated with relationship satisfaction (Conger et al., 2010), we initially thought that a higher annual income would be associated with greater relationship satisfaction, and that relationship satisfaction would mediate the association between income level and sexual satisfaction. Nevertheless, contrary to our hypothesis, men with high annual incomes reported lower relationship satisfaction. In contrast, the model for women did not show a significant relationship between these variables. This could be associated with the positive relationship between income and extra-dyadic relationships identified by Allen et al. (2005), given that socioeconomic status appears to increase the risk of infidelity in men though not in women (Saunders & Edwards, 1984). In this regard, infidelity has been associated with decreased relationship satisfaction and stability (Shackelford & Buss, 2000). Another possible explanation could be that men with a higher socioeconomic status have excessively high expectations, and the failure of these expectations could be associated with low relationship satisfaction. Future research should consider infidelity and expectations and determine their role in this issue.

Furthermore, gender-based differences were found in the mediating role of sexual functioning. Only in the final model for men did sexual functioning mediate the relationship between sexual attitudes and sexual satisfaction. This would indicate that sexual attitudes are more important in the prediction of sexual performance in the case of men. In this regard, Ortega, Sierra, and Zubeidat (2004) showed that negative sexual attitudes had more weight to predict inhibited sexual desire in men than in women. Moreover, our results showed that sexual functioning in women mediated the relationship between social support and sexual satisfaction. Women tend to report greater perceived social support (van Daalen, Sanders, & Willemson, 2005) and they

benefit more from this support as women usually talk about their problems and/or feelings more often than men (Antonucci & Akiyama, 1987; Taylor et al., 2000). Therefore, women may seek advice about their concerns, even those related to sexual dysfunction, from people in their social networks with a view to improving their sexual performance.

Regarding sexual assertiveness, as expected (Haavio-Mannila & Kontula, 1997; Santos-Iglesias et al., 2013; Sierra, Santos-Iglesias, & Vallejo-Medina, 2012), men reported a significantly greater ability to initiate sexual activity, and women, to refuse unwanted sexual activity. These results suggest that the sexual assertiveness of the participants in our study tended to follow traditional gender roles. Culturally speaking, men generally initiate sexual contact whereas women are supposed to limit such contacts (Simon & Gagnon, 1986, 2003). In our study, sexual assertiveness was found to follow different paths for men and women. In the model for women, high sexual assertiveness directly predicted greater sexual satisfaction. Quite possibly, women with high assertiveness also have greater sexual self-disclosure, which is associated with increased sexual rewards (Byers & Demmons, 1999). In fact, it has been shown that when sexual rewards outweigh the costs, sexual satisfaction is greater (Byers & MacNeil, 2006; Lawrance & Byers, 1995; Sánchez-Fuentes & Santos-Iglesias, in press). In the model for men, high sexual assertiveness was associated with greater relationship satisfaction, which thus acted as a mediating variable between sexual assertiveness and sexual satisfaction. In this regard, previous studies showed that people with high sexual assertiveness reported high relationship satisfaction (Greene & Faulkner, 2005; Morokoff et al., 1997). Sexual assertiveness has also been related to communication (Greene & Faulkner, 2005; Oattes & Offman, 2007), and communication has been associated with relationship satisfaction. In fact, relationship satisfaction was found to be the mediating variable between communication and sexual satisfaction (MacNeil & Byers, 2005, 2009).

These gender-based differences may be due to the fact that relationship satisfaction had greater weight in the prediction of sexual satisfaction for men than for women. It is thus not surprising that for men, sexual assertiveness was related to sexual satisfaction by means of relationship satisfaction. These results appear to confirm previous research findings, according to which romantic relationship (AARP, 1999), mutual love (Haavio-Mannila & Kontula, 1997) and general, relational factors (Carpenter et al., 2009) were the best predictors of sexual satisfaction for men.

However, very few studies have examined the relationship between sexual assertiveness and sexual satisfaction since most research has focused on sexual self-disclosure. Furthermore, there are even fewer studies on sexual assertiveness in men (Santos-Iglesias & Sierra, 2010).

Regarding sexual attitudes, contrary to our initial hypothesis (Fisher et al., 1988; Santos-Iglesias et al., 2013), there were no gender-based differences though this variable followed different paths for men and women. In men, as previously described, sexual attitudes were indirectly associated with sexual satisfaction by means of sexual function. In contrast, in women, sexual attitudes were directly associated with sexual satisfaction. These differences could be explained by traditional gender roles (Simon & Gagnon, 1986, 2003). Culturally, men have always had an instrumental role with an emphasis on sexual functioning. In this respect, Walfish and Myerson (1980) reported that men who adhere to traditional gender roles were most concerned with their sexual performance, and when this concern was excessive, they could even develop performance anxiety and erotophobia. In contrast, women have been socialized to be more sexually passive than men, and thus are less fixated on their sexual function. It is thus common in women for positive sexual attitudes to be directly associated with sexual satisfaction. It is true that the relationship between sexual attitudes and sexual satisfaction was initially positive in our study. However, when the other predictors were included in the model for women, the relationship between attitudes and sexual satisfaction became negative. This could be due to the negative effect of suppression (Kline, 2011; Tabachnick & Fidell, 2007). Another possibility could be that once the effect of relationship satisfaction, sexual function, and sexual assertiveness were controlled, erotophilic women tended to have overly high expectations about their sexual relationship, which could reduce sexual satisfaction. According to previous studies, expectations are a key factor in sexual satisfaction (Byers & MacNeil, 2006; Lawrance & Byers, 1995; Sánchez-Fuentes & Santos-Iglesias, in press).

Finally, it should be highlighted that having liberal political beliefs had greater weight in predicting erotophilia in women than in men, which again could be explained by traditional gender roles (Simon & Gagnon, 1986, 2003). Culturally, men have been brought up to have a more instrumental and decisive role in sex. For this reason, political ideology may not be as important in the prediction of their sexual attitudes.

However, women have always had a more emotional role in relationships. This could explain why having liberal political beliefs had greater weight in the prediction of their sexual attitudes.

Implications and Limitations

This study contributes to the knowledge of sexual satisfaction and has implications for both research and clinical practice since it confirms and extends Henderson et al. (2009). For both men and women, sexual satisfaction was found to be not only associated with aspects of physical functioning, but also with individual as well as psychological, interpersonal, social, and cultural variables. Research that focuses on assessing isolated variables at different levels of ecological theory (see Sánchez-Fuentes et al., 2014) tends to be reductionist and only provides a limited understanding of sexual satisfaction. However, in clinical practice, it is necessary to take into account the complexity of sexual relations and particularly, of sexual satisfaction. Therefore, the therapist should assess psychological factors such as depressive disorders, sexual beliefs and attitudes, relationship satisfaction, sexual dysfunction, sexual assertiveness, and even social and cultural aspects. Therapy should focus on those elements possibly associated with decreased sexual satisfaction in order to increase sexual wellbeing in particular, and quality of life in general.

The limitations of this study were the following. Firstly, participants were selected by a non-probability sampling method. Given certain characteristics of participants (e.g., high educational level, heterosexual, high sexual satisfaction, etc.), the results obtained cannot be generalized to the entire Spanish population. Furthermore, more research is needed to analyze the predictive models as well as the importance of microsystemic, mesosystemic, exosystemic, and macrosystemic variables in clinical samples, which include participants who belong to sexual minorities and who show a lower level of sexual satisfaction.

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DISCUSIÓN

Discusión

El objetivo principal de esta Tesis Doctoral ha sido analizar la satisfacción sexual y los factores asociados a la misma. Para ello se han desarrollado cinco estudios independientes. En primer lugar, se llevó a cabo un estudio teórico con el propósito de conocer los principales resultados de las investigaciones previas en las que la satisfacción sexual era la variable dependiente. A partir de esta revisión sistemática se identificaron varias limitaciones en la investigación previa, lo que condujo al planteamiento de los siguientes objetivos específicos de la Tesis. En segundo lugar, se desarrolló un estudio instrumental con el fin de adaptar y validar en población española un instrumento ampliamente utilizado a nivel internacional (Sánchez-Fuentes, Santos-Iglesias y Sierra, 2014) para evaluar la satisfacción sexual y factores que la explican, el *Interpersonal Exchange Model of Sexual Satisfaction Questionnaire* (IEMSSQ; Lawrance et al., 2011). Este trabajo proporcionó un instrumento de evaluación de la satisfacción sexual con adecuadas propiedades psicométricas para el ámbito español. El objetivo general del tercer estudio fue analizar la satisfacción sexual y su relación con variables sociodemográficas, indicadores de salud y variables interpersonales. A partir de los resultados se comprueba que tanto variables sociodemográficas, de salud e interpersonales se relacionan con la satisfacción sexual. Por tanto, se demuestra la complejidad de este constructo y se plantea la necesidad de realizar futuras investigaciones en las que la satisfacción sexual sea examinada bajo el marco de modelos teóricos consolidados. Por ello, el cuarto estudio tuvo como objetivo analizar la validez de un modelo teórico, el Modelo de Intercambio Interpersonal de Satisfacción Sexual (*Interpersonal Exchange Model of Sexual Satisfaction*, IEMSS; Lawrance y Byers, 1992, 1995). Tras los resultados obtenidos se comprueba que el modelo examinado es válido para el estudio de la satisfacción sexual en parejas heterosexuales españolas. Por último, en el quinto estudio el objetivo fue examinar un modelo predictivo para conocer la importancia de diversas variables asociadas a la satisfacción sexual analizadas de forma conjunta. El modelo se desarrolló desde la perspectiva que ofrece la Teoría Ecológica del desarrollo humano (Bronfenbrenner, 1994). Variables individuales (actitudes sexuales), interpersonales (satisfacción con la relación, funcionamiento sexual y asertividad sexual), sociales (apoyo social y nivel socioeconómico) y culturales (ideología política, religión profesada y práctica religiosa)

fueron predictoras de la satisfacción sexual. En definitiva, la presente Tesis Doctoral ofrece un instrumento de evaluación y amplía el conocimiento, en España, sobre la satisfacción sexual y los factores asociados a la misma.

Tras la revisión sistemática de la literatura llevada a cabo en el primer estudio, se comprueba, en primer lugar, la escasez de investigaciones sobre la satisfacción sexual en población española. De los 197 estudios revisados solo seis de ellos (3,04%) incluían muestras españolas, de los cuales, únicamente en tres, las muestras estaban formadas por participantes de la población general (Fuertes, 2000; Santos Iglesias et al., 2009; Sierra, Vera-Villarroel y Martín-Ortiz, 2002). En los restantes, la muestra la integraban estudiantes universitarios (Carrobles et al., 2011; Yela, 2000) y prisioneros (Carcedo et al., 2011). En segundo lugar, es importante señalar que solo una de estas investigaciones tenía como objetivo validar en población española un instrumento de evaluación de la satisfacción sexual (Santos Iglesias et al., 2009). Tras examinar los principales resultados de los estudios revisados se comprueba que son numerosas las variables predictoras de la satisfacción sexual. Asimismo, los resultados indican que la satisfacción con las relaciones sexuales es un aspecto clave de la salud sexual y del bienestar general de las personas. Sin embargo, se echan en falta trabajos basados en modelos teóricos que guíen el estudio de este constructo.

Esta revisión sistemática permitió detectar algunas de las limitaciones asociadas al estudio de la satisfacción sexual. Uno de los problemas, tal como ya se señaló, hace referencia a la escasez de estudios con muestras españolas. Por ello, los estudios que componen esta Tesis Doctoral son relevantes dado que existe la necesidad de aumentar el conocimiento sobre la satisfacción sexual en España. Una de las principales limitaciones es la falta de estudios instrumentales. Si bien es cierto que existe una adaptación española de uno de los instrumentos más empleados, el Índice de Satisfacción Sexual (ISS; Hudson et al., 1981) llevada a cabo por Santos Iglesias et al. (2009), esta escala presenta algunas deficiencias, como la inclusión de ítems predictores de la satisfacción sexual, probablemente debido a que no está basada en ningún modelo teórico, las cuales son superadas por la *Global Measure of Sexual Satisfaction* (Mark, Herbenick, Fortenberry, Sanders y Reece, 2014), una de las subescalas que forma parte del instrumento que fue objeto de adaptación en esta Tesis Doctoral, el *Interpersonal Exchange Model of Sexual Satisfaction Questionnaire*, IEMSSQ (Lawrance et al., 2011). Finalmente, la otra limitación alude a la falta de estudios realizados en España, de igual manera que en otros países, en los que la satisfacción sexual haya sido

abordada desde modelos teóricos consolidados. Por ello, los objetivos generales del cuarto y quinto estudio fueron precisamente abordar la satisfacción sexual desde aproximaciones teóricas sólidas.

Muchas de las investigaciones realizadas sobre la satisfacción sexual se han llevado a cabo sin estar basadas en la teoría, en parte debido a la falta de instrumentos de evaluación desarrollados a partir de un modelo teórico (Lawrance y Byers, 1995; Stulhofer et al., 2010). Un autoinforme que supera esta limitación es el *Interpersonal Exchange Model of Sexual Satisfaction Questionnaire* (IEMSSQ; Lawrance et al., 2011), desarrollado bajo el marco teórico del Modelo de Intercambio Interpersonal de Satisfacción Sexual (IEMSS; Lawrance y Byers, 1992, 1995). El IEMSSQ (Lawrance et al., 2011) incluye una escala que evalúa la satisfacción sexual general (*Global Measure of Sexual Satisfaction*; GMSEX), otra medida idéntica para evaluar uno de los componentes que incluye el modelo teórico para explicar la satisfacción sexual, la satisfacción con la relación de pareja (*Global Measure of Relationship Satisfaction*; GMREL), y un cuestionario (*Exchange Questionnaire*; EQ) que evalúa los restantes componentes en los que se basa el modelo teórico para explicar la satisfacción sexual: balance de beneficios y costes sexuales (*sexual Rewards-Costs*; REW-CST), nivel comparativo de beneficios y costes sexuales (*Comparison Level of sexual rewards and costs*; CL_{REW}-CL_{CST}) e igualdad de beneficios e igualdad de costes sexuales (*Equality of sexual rewards, Equality of sexual costs*; EQ_{REW}, EQ_{CST}). Además, incluye un listado compuesto por 58 ítems referidos a intercambios que se pueden producir en las relaciones sexuales y que pueden ser identificados como beneficios y/o costes sexuales. Por tanto, este instrumento de evaluación ofrece medidas que corresponden tanto con la definición conceptual de la satisfacción sexual (i.e., "una respuesta afectiva derivada de la propia evaluación subjetiva de los aspectos positivos y negativos asociados a las propias relaciones sexuales"; Lawrance y Byers, 1995, p. 268) como con los componentes propuestos por el modelo en el que se fundamenta para explicar la satisfacción sexual. Asimismo, no incluye ítems predictores de la satisfacción sexual, superando por tanto una limitación metodológica que presentan otras escalas (Mark et al., 2014) y mostrando adecuadas propiedades psicométricas en países como Canadá (Lawrance et al., 2011) y China (Renaud et al., 1997). Por ello, el objetivo principal del segundo estudio fue adaptar y examinar las propiedades psicométricas del IEMSSQ en población española.

La fiabilidad de consistencia interna obtenida fue excelente para la medida que evalúa la satisfacción sexual, GMSEX (α = 0,92 y 0,93 en varones y mujeres, respectivamente) y para la medida que evalúa la satisfacción con la relación, GMREL (α = 0,94 en ambos sexos). La fiabilidad como estabilidad temporal de los ítems (a las cuatro y seis semanas) que forman parte de GMSEX, GMREL y del EQ se examinó mediante el alfa de Cronbach como recomiendan Jonason y Webster (2010). Los resultados fueron buenos para todos los ítems independientemente del género del encuestado. Asimismo, la fiabilidad temporal de las medidas GMSEX, GMREL, balance de beneficios y costes sexuales (REW-CST), nivel comparativo de beneficios y costes sexuales (CL_{REW}-CL_{CST}), igualdad de beneficios sexuales (EQ_{REW}) e igualdad de costes (EQ_{CST}), número de beneficios y número de costes sexuales fue buena a las cuatro y seis semanas, aunque para los componentes de igualdad (EQ_{REW}, EQ_{CST}) fue moderada en varones y mujeres, y baja para el número de beneficios sexuales a las seis semanas en mujeres. En estudios previos también fue moderada la fiabilidad test-retest para los componentes de igualdad, sobre todo en parejas de corta duración (Byers y MacNeil, 2006; Lawrance y Byers, 1995). Una posible explicación, desde el enfoque de la Teoría de Intercambio Social (Thibaut y Kelley, 1959), podría ser que la percepción de igualdad depende de la evaluación de los intercambios sexuales personales, así como los de la pareja, y en este sentido, la percepción sobre la pareja es probable que cambie llegando a ser más realista a lo largo de la relación (Byers y Wang, 2004; Sprecher, 2001).

Por otra parte, los resultados también mostraron evidencias de validez de constructo y concurrente para el IEMSSQ. A partir de un análisis factorial confirmatorio se comprobó que las medidas GMSEX y GMREL evalúan dos constructos relacionados pero independientes. Este resultado indica que la satisfacción sexual y la satisfacción con la relación son constructos independientes pero estrechamente relacionados (Hassebrauck y Fehr, 2002). Además, GMSEX, los componentes del modelo (GMREL, REW-CST, CL_{REW}-CL_{CST}, EQ_{REW}, EQ_{CST}), el número de beneficios y el número de costes sexuales se asociaron con otras medidas que evalúan la satisfacción sexual, el ajuste marital y el funcionamiento sexual, excepto los componentes de igualdad en varones. Estudios previos también han señalado una asociación positiva entre la satisfacción sexual y el ajuste marital (Byers, 2005; Mark y Jozkowski, 2013), y entre la satisfacción sexual, la satisfacción con la relación y el funcionamiento sexual (Heiman et al, 2011; Stephenson y Meston, 2011). En varones, los componentes de igualdad no

se asociaron con otras medidas, excepto EQ_{CST} que se asoció con la satisfacción sexual. Si se tienen en cuenta los roles tradicionales de género, cabe esperar que los hombres se preocupen más por sus propios deseos y necesidades sexuales (Byers, 1996), por lo que los componentes de igualdad serían menos importantes para explicar su propia satisfacción sexual. En cambio, las mujeres en parte evalúan su propia satisfacción sexual teniendo en cuenta la satisfacción de la pareja (McClelland, 2011), por tanto, para ellas los componentes de igualdad tendrían mayor importancia para explicar la satisfacción sexual. No obstante, en investigaciones anteriores los componentes de igualdad también mostraron menor peso para predecir la satisfacción que el resto de componentes (Byers et al., 1998; Byers y MacNeil, 2006; La France, 2010; Lawrance y Byers, 1995; Peck et al., 2005; Renaud et al., 1997). Es posible que los componentes de igualdad tengan mayor importancia para predecir la satisfacción sexual en parejas con baja satisfacción sexual (Byers y MacNeil, 2006), por lo que esto podría explicar los resultados obtenidos, ya que la muestra evaluada informó alta satisfacción sexual.

En definitiva, la adaptación española del *Interpersonal Exchange Model of Sexual Satisfaction Questionnaire* (Sánchez-Fuentes, Santos-Iglesias, Byers y Sierra, en prensa) presenta adecuadas propiedades psicométricas. Por tanto, supone la primera adaptación de un instrumento de evaluación desarrollado a partir de un modelo teórico específico para explicar la satisfacción sexual en España. Además, puede ser de gran utilidad tanto para la investigación, con el fin de evaluar la satisfacción sexual y componentes que la explican, como para la práctica clínica, pues puede ayudar al terapeuta a conocer los aspectos específicos que contribuyen a la baja satisfacción sexual en la pareja (Byers, 1999).

Tras la adaptación española del IEMSSQ, se llevó a cabo el tercer estudio con el objetivo de analizar los niveles de satisfacción sexual de varones y mujeres españoles que mantenían una relación de pareja heterosexual u homosexual. Conjuntamente, se examinó la relación de variables sociodemográficas, indicadores de salud y variables interpersonales con la satisfacción sexual. En primer lugar, se comprobó la ausencia de diferencias estadísticamente significativas en función del género y de la orientación sexual. Debido a que uno de los objetivos específicos de la mayoría de estudios incluidos en la Tesis Doctoral fue examinar diferencias de género en los niveles de satisfacción sexual este aspecto se discutirá posteriormente.

En la muestra heterosexual, los participantes de más edad, con menor nivel educativo y que estaban casados informaron menor satisfacción sexual que los jóvenes,

con alto nivel educativo y que mantenían una relación de noviazgo. En la muestra homosexual, ninguna de estas variables se asoció con la satisfacción sexual. De modo global, una buena salud física y psicológica, así como una alta satisfacción con la relación, se asociaron con mayor satisfacción sexual, tanto en personas heterosexuales como homosexuales. Mayor duración de la relación se asoció con menor satisfacción sexual solo en la muestra formada por participantes heterosexuales. Por último, cabe señalar que el 55% de la varianza de la satisfacción sexual de los sujetos heterosexuales fue predicha por la vitalidad, depresión, satisfacción con la relación, duración de la relación y tipo de relación. En el caso de los participantes homosexuales, el 44% de la varianza de la satisfacción sexual fue predicha por el dolor corporal y la satisfacción con la relación.

Se encontraron algunas diferencias respecto a las variables asociadas con la satisfacción sexual entre los participantes heterosexuales y homosexuales, aunque en el nivel de satisfacción no difirieron entre sí. Es posible que algunas de estas diferencias se deban a ciertas características de la muestra homosexual, por ejemplo el pequeño tamaño muestral así como su alto nivel educativo. Estos resultados son relevantes ya que suponen un primer acercamiento al estudio de la satisfacción sexual en personas españolas con orientación homosexual. No obstante, se plantea la necesidad de realizar en España futuras investigaciones centradas en el estudio de la satisfacción sexual de minorías sexuales. Por otra parte, se comprueba que la satisfacción sexual está asociada a diversas variables, aunque parece ser la satisfacción con la relación la más relevante. Estudios previos ya habían mostrado la estrecha relación entre ambas variables (Byers, 2005; Henderson et al., 2009; Kisler y Christopher, 2008; Mark et al., 2013). Por tanto, dada la fuerte relación entre la satisfacción con la relación y la satisfacción sexual, conocer los mecanismos que aumentan la satisfacción sexual se convierte en un aspecto fundamental, ya que una baja satisfacción sexual tiene un impacto negativo en la estabilidad matrimonial (Keim y Lappin, 2002), así como en la calidad de vida (Byers y Rehman, 2014; Ventegodt, 1998).

En resumen, este tercer estudio (Sánchez-Fuentes y Sierra, 2015) contribuye al conocimiento de la satisfacción sexual en población española. No obstante, aunque se empleó la GMSEX, una de las mejores medidas para evaluar la satisfacción sexual (Mark et al., 2014), este estudio no está exento de la crítica a las investigaciones no guiadas por un modelo teórico de la satisfacción sexual. Por ello, con el propósito de superar esta limitación se llevaron a cabo los siguientes dos estudios.

El objetivo general del cuarto estudio fue analizar la satisfacción sexual desde la perspectiva que ofrece el Modelo de Intercambio Interpersonal de Satisfacción Sexual (*Interpersonal Exchange Model of Sexual Satisfaction*, IEMSS; Lawrance y Byers, 1992, 1995). Se analizó el nivel de satisfacción sexual, diferencias de género y la validez del IEMSS en una muestra compuesta por parejas heterosexuales españolas.

Investigaciones previas habían informado que los varones estaban más satisfechos sexualmente que las mujeres (Baumeister, Catanese y Vohs, 2001; Petersen y Hyde, 2010). En España los resultados sobre las diferencias de género en satisfacción sexual no son consistentes (Ministerio de Sanidad y Política Social, 2009; Santos Iglesias et al., 2009). Por ello, un objetivo específico de esta Tesis, y común en cuatro de los cinco estudios que integra, es analizar estas diferencias. Se planteó como hipótesis que los hombres informarían mayor satisfacción sexual que las mujeres, ya que en España aún persisten los roles tradicionales de género (Gutiérrez-Quintanilla, Rojas-García y Sierra, 2010; Santos-Iglesias, Vallejo-Medina y Sierra, 2014). Sin embargo, en contra de lo esperado, no se encontraron diferencias de género en satisfacción sexual ni en los componentes que forman el IEMSS. La ausencia de diferencias podría ser explicada por dos motivos. En primer lugar, los estudios que han evaluado la satisfacción sexual con la GMSEX tampoco encontraron diferencias (Byers y MacNeil, 2006; Lawrance y Byers, 1995; Renaud et al., 1997; Sánchez-Fuentes et al., en prensa; Sánchez-Fuentes y Sierra, 2015). Por ello, parece ser que el instrumento de evaluación empleado desempeña un papel importante en esta cuestión. Una de las críticas que han recibido las escalas que evalúan la satisfacción sexual es que incluyen ítems que son predictores de la misma (Mark et al., 2014). Por ejemplo, instrumentos frecuentemente empleados como el Índice de Satisfacción sexual (ISS; Hudson et al., 1981; Santos Iglesias et al., 2009) contiene ítems referidos al funcionamiento sexual y a aspectos físicos de las relaciones sexuales, como puede ser la frecuencia de actividad sexual. Si tenemos en cuenta que estos factores son especialmente importantes para la satisfacción sexual de los varones (Lawrance y Byers, 1995), no es extraño que las investigaciones anteriores hayan concluido que los hombres están más satisfechos sexualmente que las mujeres. En segundo lugar, otra explicación podría ser que los roles tradicionales de género están cambiando en España. La media de edad de los participantes evaluados fue relativamente joven y sus actitudes sexuales podrían estar en proceso de cambio hacia unos roles más igualitarios (Laumann et al., 2006; Santos-Iglesias et al., 2014). En esta línea, una reciente investigación realizada en España

(Castellanos-Torres et al., 2013) tampoco encontró diferencias de género entre los participantes menores de 44 años, mientras que los varones de 45 y, especialmente, los de más de 65 años informaron mayor satisfacción sexual que las mujeres. En esta misma línea, Sierra, Vallejo-Medina, Santos-Iglesias y Lameiras Fernández (2012) señalan que mujeres españolas mayores de 51 años informan menor satisfacción sexual que los varones y, más recientemente, Sierra, Vallejo-Medina, Sánchez-Fuentes, Granados y Moyano (2014) informan de una interacción positiva del sexo y la edad a la hora de predecir la satisfacción sexual, es decir, que con el incremento de la edad se detectan diferencias de género en satisfacción sexual, mostrándose las mujeres menos satisfechas sexualmente.

Asimismo, se examinaron diferencias de género en el tipo de intercambios que hombres y mujeres señalan como beneficio y coste sexual. Se planteó que los varones informarían como beneficios los intercambios sexuales relacionados con los aspectos físicos, mientras que las mujeres señalarían como beneficios los intercambios emocionales y como costes los físicos (Lawrance y Byers, 1995; McCormick, 1987, 2010). Los resultados obtenidos confirman parcialmente la hipótesis planteada. Los varones informaron como beneficio su capacidad para alcanzar el orgasmo, lo que indica que para ellos los aspectos físicos son importantes en sus relaciones sexuales (Lawrance y Byers, 1995). Además, señalaron como costes sexuales la frecuencia con la que su pareja experimenta el orgasmo, la facilidad de su pareja para alcanzar el orgasmo y la respuesta de su pareja a sus propuestas de inicio de actividad sexual. Las mujeres valoraron de forma positiva aspectos emocionales como la respuesta de su pareja a sus propuestas de actividad sexual, mientras que identificaron como costes sexuales aspectos físicos como estar desnudo delante de la pareja y su propia capacidad para alcanzar el orgasmo. También más mujeres que varones señalaron como coste el grado en el que participan con la pareja en actividades íntimas después de haber mantenido relaciones sexuales. Estos resultados apoyan la hipótesis planteada, sin embargo, solo hubo diferencias estadísticamente significativas en ocho de 116 comparaciones. Por tanto, de forma general, varones y mujeres informan prácticamente los mismos intercambios como beneficios y costes. Es posible que las escasas diferencias de género puedan deberse, como se indicó anteriormente, a que los roles tradicionales de género están cambiando en España, al menos entre las personas jóvenes (Laumann et al., 2006; Santos-Iglesias et al., 2014). También es posible que estos resultados se deban a que la

muestra evaluada informó alta satisfacción sexual y mayores beneficios que costes sexuales.

En definitiva, no parecen existir diferencias de género en satisfacción sexual, y tanto hombres como mujeres españoles informan altos niveles de satisfacción. Ahora bien, las mujeres consideran con mayor frecuencia que los hombres los aspectos físicos, tales como el orgasmo, como un coste, es decir, un elemento negativo en sus relaciones sexuales. Por ello, se debe hacer nuevamente hincapié en la importancia de los instrumentos de evaluación empleados, puesto que los que incluyen ítems referidos a aspectos físicos pueden subestimar el nivel global de satisfacción sexual de las mujeres.

Respecto a la validez del IEMSS, en primer lugar, se comprobó que todos los componentes que forman el modelo se asocian con la satisfacción sexual, excepto la igualdad de beneficios (EQ_{REW}) en varones. En estudios previos realizados en Canadá (Byers et al., 1998; Byers y MacNeil, 2006; Lawrance y Byers, 1995), China (Renaud et al., 1997) y España (Sánchez-Fuentes et al., en prensa) la relación entre los componentes de igualdad y la satisfacción sexual también fue menor, en comparación con la asociación del resto de componentes y la satisfacción sexual. Una posible explicación es que los varones tienen un rol más instrumental y se centran en sus propios deseos sexuales (Miller y Byers, 2004), por lo que los componentes de igualdad serían menos importantes para explicar su satisfacción sexual. También es posible que los componentes de igualdad sean más relevantes en parejas con baja satisfacción sexual (Byers y MacNeil, 2006), aspecto que sería interesante examinar en futuras investigaciones. Por otra parte, también se comprobó que las puntuaciones de varones y mujeres en satisfacción sexual y componentes del modelo estaban correlacionadas entre sí, es decir, existía interdependencia entre las puntuaciones de hombres y mujeres. Este resultado, por una parte, muestra la importancia de evaluar a los dos miembros de la pareja cuando se realizan investigaciones sobre sexualidad en relaciones íntimas (DeLamater y Hyde, 2004) y, por otra, permitió realizar un análisis diádico (Cook y Kenny, 2005; Kenny, Kashy y Cook, 2006) con el fin de examinar los datos mediante un modelo de ecuaciones estructurales guiado por el Modelo de Interdependencia Actor-Pareja (*Actor-Partner Interdependence Model*, APIM; Cook y Kenny, 2005).

Hombres y mujeres informaron mayor satisfacción sexual cuando la satisfacción con la relación era alta (GMREL), los beneficios sexuales superaban a los costes (REW-CST) y el nivel comparativo de beneficios sexuales era mayor que el nivel comparativo de costes sexuales (CL_{REW}-CL_{CST}). Estos resultados coinciden con estudios previos

(Byers et al., 1998; Byers y MacNeil, 2006; Lawrance y Byers, 1995). Además, en el caso de las mujeres, mayor percepción de igualdad de costes (EQ_{CST}) predijo mayor satisfacción sexual. Una posible explicación a este resultado es que las mujeres sienten la necesidad de satisfacer las necesidades sexuales de su pareja (Byers, 1996; Lawrance, Taylor y Byers, 1996). En consonancia, se sentirían menos satisfechas si consideran que los costes de su pareja son mayores o si sus propias necesidades sexuales no son consideradas por su pareja. Por último, se encontró que la satisfacción sexual de las mujeres era menor cuando sus parejas informaban más beneficios sexuales que costes (REW-CST). Esto podría deberse a que los hombres se centran en aumentar sus beneficios y disminuir sus costes, por lo que durante las relaciones sexuales tenderían a satisfacer sus propias necesidades sexuales (Miller y Byers, 2004), como por ejemplo conseguir el orgasmo, que es un factor importante para su satisfacción sexual, pero no tanto para la satisfacción sexual de las mujeres (McClelland, 2011).

Los resultados obtenidos en este cuarto estudio (Sánchez-Fuentes y Santos-Iglesias, en prensa) muestran que varones y mujeres informan alta satisfacción sexual, lo que coincide con estudios anteriores realizados en muestras españolas (Castellanos-Torres et al., 2013; Sierra et al., 2014; Sierra et al., 2012), así como con los estudios previos incluidos en esta Tesis Doctoral (Sánchez-Fuentes et al., en prensa; Sánchez-Fuentes y Sierra, 2015). Además, se comprueba la validez del IEMSS, que llegó a explicar el 74% de la varianza de la satisfacción sexual. Este modelo teórico tiene implicaciones tanto para la investigación como para la práctica clínica. En primer lugar, su aplicación en la investigación será interesante para aumentar la comprensión de la satisfacción sexual así como aportar más evidencias de validez al modelo. En este sentido, Byers y Rehman (2014) proponen tener en cuenta, en futuras investigaciones, la duración de la relación y realizar estudios longitudinales, así como incluir factores que pueden influir en los componentes que forman el IEMSS, como las actitudes sexuales, la imagen corporal, estilos de apego, etc. En segundo lugar, el IEMSS puede guiar la práctica clínica. En este sentido, el terapeuta debe tener en cuenta los componentes que afectan a la satisfacción sexual: satisfacción con la relación, beneficios y costes sexuales, expectativas sexuales y la percepción de igualdad. Asimismo, el listado de beneficios y costes sexuales puede ser de gran ayuda para conocer los aspectos que causan insatisfacción a los miembros de la pareja, tratando de este modo aumentar los beneficios y disminuir los costes sexuales (Byers, 1999).

Finalmente, en el quinto estudio se desarrolló un modelo predictivo teniendo en cuenta la Teoría Ecológica (Bronfenbrenner, 1994) y la investigación anterior en satisfacción sexual (Henderson et al., 2009). Este estudio supone, por una parte, el aumento de la comprensión de la satisfacción sexual en personas heterosexuales españolas y, por otra parte, trata de reforzar y ampliar los resultados del estudio de Henderson et al. (2009) al incluir una muestra más amplia integrada por hombres y mujeres, así como variables no tenidas en cuenta anteriormente. Se analizó la relación de variables individuales (depresión y actitudes sexuales), interpersonales (satisfacción con la relación, funcionamiento sexual y asertividad sexual), sociales (apoyo social, paternidad y nivel socioeconómico) y culturales (ideología política, religión profesada y práctica religiosa) con la satisfacción sexual. Se analizaron diferencias de género y, mediante dos modelos de ecuaciones estructurales, se comprobó el ajuste del modelo examinado en varones y en mujeres.

De nuevo hombres y mujeres informaron elevados niveles de satisfacción sexual, sin encontrarse diferencias de género y, por tanto, coincidiendo con los resultados discutidos con anterioridad (Sánchez-Fuentes y Santos-Iglesias, en prensa; Sánchez-Fuentes et al., en prensa; Sánchez-Fuentes y Sierra, 2015). La satisfacción sexual de los varones fue predicha de manera directa por la satisfacción con la relación y el funcionamiento sexual, y de forma indirecta por la ideología política, la práctica religiosa, el apoyo social, el nivel socioeconómico, la asertividad sexual de inicio y las actitudes sexuales. En mujeres, la satisfacción con la relación, el funcionamiento sexual, la asertividad sexual y las actitudes sexuales se asociaron de manera directa con la satisfacción sexual, mientras que la ideología política, la práctica religiosa y el apoyo social se asociaron de forma indirecta con la satisfacción sexual.

Acudir con baja frecuencia a actos religiosos y tener una ideología progresista se asoció con unas actitudes sexuales más positivas, lo que a su vez se asoció con mayor satisfacción sexual. En esta línea los resultados de estudios anteriores mostraron que las personas religiosas tienden a mostrar sentimientos de culpa derivados de pensamientos y/o comportamiento sexuales (Davidson, Moore y Ullstrup, 2004; Sierra, Perla y Santos-Iglesias, 2011), así como las personas conservadoras suelen mostrar más prejuicios y actitudes negativas hacia la sexualidad (del Río-Olvera, López-Vega y Cabello-Santamaría, 2013; Sierra, Ortega y Gutiérrez-Quintanilla, 2008).

Respecto a las variables del exosistema, alta percepción de apoyo social predijo mayor satisfacción con la relación, lo que a su vez se asoció con mayor satisfacción sexual. Además, en varones un mayor nivel socioeconómico predijo de manera indirecta, a través de la satisfacción con la relación, menor satisfacción sexual. Este resultado podría estar asociado a la relación positiva entre ingresos y relaciones extra-diádicas (Allen et al., 2005), teniendo en cuenta que el nivel socioeconómico parece aumentar el riesgo de infidelidad en varones, pero no en mujeres (Saunders y Edwards, 1984). Y en esta línea, la infidelidad se ha relacionado con baja satisfacción con la relación (Shackelford y Buss, 2000). Otra posible explicación es que los varones con altos ingresos anuales tengan unas expectativas no realistas sobre sus relaciones y el incumplimiento de tales expectativas se asociaría con menor satisfacción con la relación.

Las variables pertenecientes al nivel mesosistema (satisfacción con la relación, funcionamiento sexual y asertividad sexual) se asociaron de manera directa con la satisfacción sexual, excepto la asertividad sexual de inicio en los hombres. La satisfacción con la relación fue la variable con mayor peso para predecir la satisfacción sexual, lo que coincide con estudios anteriores que habían mostrado su importancia para predecir la satisfacción sexual de forma directa (Byers, 2005; Heiman et al., 2011; Mark y Jozkowski, 2013; Sánchez-Fuentes y Santos-Iglesias, en prensa; Sánchez-Fuentes y Sierra, 2015), así como su papel mediador (Bancroft, Loftus y Long, 2003; Henderson et al., 2009; Rosen et al., 2014). Alta satisfacción con la relación predijo alta satisfacción sexual y medió la relación entre el apoyo social y la satisfacción sexual, en varones y mujeres. Asimismo, tal y como se esperaba (Heiman et al., 2011; Smith et al., 2012), un mejor funcionamiento sexual predijo mayor satisfacción sexual. No obstante hubo algunas diferencias de género. En los hombres, el funcionamiento sexual medió la relación entre actitudes sexuales y satisfacción sexual, lo que estaría indicando que las actitudes sexuales tienen mayor importancia para predecir el funcionamiento sexual de los varones. En este sentido, Ortega, Sierra y Zubeidat (2004) ya habían señalado que las actitudes sexuales negativas tenían mayor peso para predecir el deseo sexual inhibido en varones que en mujeres. En mujeres, el funcionamiento sexual medió la relación entre apoyo social y satisfacción sexual. Una posible explicación de esta diferencia de género podría atribuirse a que las mujeres tienden a mostrar mayor percepción de apoyo social (van Daalen, Sanders y Willemson, 2005) y se benefician

más de estos apoyos dado que suelen hablar sobre sus problemas y/o sentimientos con mayor frecuencia que los hombres (Taylor et al., 2000). De acuerdo con investigaciones previas (Hurlbert, Apt y Rabehl, 1993; Santos-Iglesias, Sierra y Vallejo-Medina, 2013), una elevada asertividad sexual predijo actitudes sexuales más positivas en varones y mujeres, sin embargo también se encontraron algunas diferencias de género. En varones, mayor asertividad sexual de inicio predijo mayor satisfacción con la relación, lo que a su vez se asoció con mayor satisfacción sexual. Si bien la literatura apunta que las personas con mayor asertividad sexual también informan mayor satisfacción con la relación (Greene y Faulkner, 2005; Morokoff et al., 1997) es posible que este resultado solo se encontrara en el modelo de varones debido a que la satisfacción con la relación tuvo mayor peso para predecir la satisfacción sexual en varones. Este resultado podría reforzar los hallazgos de los estudios que concluyen que los factores relacionales son más importantes para predecir la satisfacción sexual de varones (AARP, 1999; Carpenter, Nathanson y Kim, 2009; Haavio-Mannila y Kontula, 1997). En mujeres, mayor asertividad sexual predijo de forma directa mayor satisfacción sexual. Es probable que las mujeres con mayor asertividad tengan mayor autorrevelación sexual, lo que se relaciona con el aumento de los beneficios sexuales (Byers y Demmons, 1999), y por tanto con mayor satisfacción sexual (Byers et al., 1998; Byers y MacNeil, 2006; Lawrance y Byers, 1995; Renaud et al., 1997; Sánchez-Fuentes y Santos-Iglesias, en prensa).

Finalmente, en cuanto a las actitudes sexuales, como se ha descrito anteriormente, en varones se asociaron de manera indirecta a través del funcionamiento sexual con la satisfacción sexual, mientras que en mujeres la relación entre actitudes sexuales y satisfacción sexual fue directa. En un primer momento la relación entre las actitudes sexuales y la satisfacción sexual fue positiva, pero la introducción en el modelo de mujeres el resto de variables predictoras hace que la relación entre actitudes y satisfacción sexual pase a ser negativa. Este resultado podría ser consecuencia de un efecto de supresión negativa (Kline, 2011; Tabachnick y Fidell, 2007). Es posible que las mujeres con actitudes positivas hacia la sexualidad, una vez controlado el efecto de la satisfacción con la relación, el funcionamiento sexual y la asertividad sexual, tengan unas expectativas demasiado elevadas acerca de sus relaciones sexuales, disminuyendo la satisfacción sexual si no se ven cumplidas.

Este último estudio (Sánchez-Fuentes, Salinas y Sierra, 2015) ratifica de nuevo la ausencia de diferencias de género en satisfacción sexual y que tanto hombres como mujeres informan una elevada satisfacción sexual. Asimismo, los modelos finales de varones y mujeres fueron bastante parecidos, aunque hubo algunas diferencias. No obstante mostraron buen ajuste y explicaron el 56,7% y 55,4% de la satisfacción sexual de varones y mujeres, respectivamente.

A modo de resumen, la presente Tesis Doctoral contribuye al conocimiento de la satisfacción sexual y tiene implicaciones tanto para la investigación como para la práctica clínica en el ámbito de la sexualidad humana. En primer lugar, se aporta desde la perspectiva que ofrece el IEMSS un instrumento fiable y válido para la evaluación de los componentes asociados a la satisfacción sexual y una medida global de la misma (GMSEX) para su uso en población española. El IEMSSQ constituye una herramienta de evaluación útil para examinar los componentes específicos que pueden estar relacionados con la baja satisfacción sexual en la pareja (Byers, 1999), por lo que supone una ventaja importante con respecto a otros instrumentos, como el Índice de Satisfacción Sexual (Santos Iglesias et al., 2009). En segundo lugar, se avanzó en el conocimiento de la satisfacción sexual en España en cuanto a las diferencias de género, demostrándose además su asociación con numerosas variables. Por ello, se recomienda el empleo de modelos teóricos para su estudio. Ello nos lleva a validar un modelo conceptual de la satisfacción sexual y examinar un modelo predictivo para su empleo en población española. Tras los resultados se comprueba la validez de ambos modelos. El IEMSS tiene en cuenta el contexto interpersonal en el que se producen las relaciones sexuales y proporciona un marco teórico para explicar la satisfacción sexual. Por su parte, el modelo ecológico resulta útil para examinar los factores relacionados con la satisfacción sexual. Es decir, ambos modelos no son incompatibles ya que las variables examinadas en el modelo predictivo podrían ser consideradas, de acuerdo con el IEMSS, algunos de los intercambios específicos que se producen en las relaciones sexuales y que dependiendo de su valoración como positiva (beneficios) o negativa (costes) se asociarán con alta o baja satisfacción sexual.

De acuerdo con los resultados obtenidos, en la práctica clínica será necesaria la evaluación de los aspectos no sexuales de la relación, como la satisfacción con la relación de pareja, así como factores asociados con la satisfacción sexual como las actitudes sexuales, el funcionamiento sexual o la asertividad sexual. Para ello, el listado de beneficios y costes sexuales que incluye el IEMSSQ puede constituir una

herramienta muy práctica para que los miembros de la pareja informen de aspectos positivos y negativos de sus relaciones sexuales. Respecto a la intervención, en caso de baja satisfacción con la relación, el tratamiento debería ser enfocado desde la terapia de pareja haciendo uso, por ejemplo, de entrenamiento en habilidades de comunicación (asertividad, escucha activa, etc.), entrenamiento en solución de problemas, reducción de conductas negativas y aceptación de los conflictos para promover mayor intimidad en la relación (Byers, 1999; Jacobson y Christensen, 1996; Jacobson, Christensen, Prince, Cordova y Eldridge, 2000). Si la baja satisfacción sexual se debe a aspectos sexuales el terapeuta debería hacer uso de terapia sexual. En caso de disfunciones en la respuesta sexual las intervenciones suelen incluir información y educación sexual, cambio de las actitudes sexuales negativas, habilidades para mejorar la comunicación, intervenciones para reducir la ansiedad de rendimiento, la focalización sensorial y genital (Beck, 1995; Halvorsen y Metz, 1992; Labrador y Crespo; 2001; Levine, 1992; McCarthey, 1990; Sierra y Buela-Casal, 2004), así como técnicas específicas dependiendo de la disfunción, por ejemplo, la técnica de "parada y arranque" (Semans, 1956) o "comprensión" y "comprensión basilar" (Master y Johnson, 1970) para el tratamiento de la eyaculación precoz o el entrenamiento guiado en masturbación acompañado por el entrenamiento del músculo pubocoxígeo para el trastorno orgásmico primario en mujeres (LoPiccolo y Lobitz, 1972; Morokoff y LoPiccolo, 1986). No obstante, en lugar de tratar una disfunción sexual en particular también podría usarse la terapia sexual multidimensional (Markovic, 2007, 2013) ya que incluye en la intervención factores psicológicos, interpersonales, sociales y culturales que pueden estar relacionados con la disfunción sexual. Por otra parte, dado que las expectativas pueden estar asociadas con la baja satisfacción sexual, de acuerdo con McCarthy y McDonald (2009) la intervención podrá dirigirse al establecimiento de expectativas sexuales realistas sobre las relaciones sexuales. En esta línea resulta interesante el enfoque psicobiosocial que propone el "*Good-Enough Sex Model*" (Metz y McCarthy, 2007) ya que pone el énfasis en las expectativas, señalando que las relaciones sexuales pueden ser placenteras, pero varían y cambian en el tiempo. Por último, se recomienda evaluar y enfocar el tratamiento a los dos miembros de la pareja para comprender las dinámicas que influyen en su satisfacción sexual y desarrollar tratamientos eficaces para aumentar la satisfacción sexual en particular, y la calidad de vida en general.

CONCLUSIONES

Conclusiones

1. La adaptación española del *Interpersonal Exchange Model of Sexual Satisfaction Questionnaire* (IEMSSQ) supera las limitaciones asociadas a otros instrumentos de evaluación. Este cuestionario está basado en un modelo teórico desarrollado para explicar la satisfacción sexual, por lo que no incluye ítems predictores de la satisfacción sexual y cuenta con adecuados índices de fiabilidad y validez.
2. Variables sociodemográficas como la edad y el nivel educativo, variables de salud física y psicológica, y variables interpersonales como la satisfacción con la relación, la duración de la relación y el tipo de relación se asocian a la satisfacción sexual.
3. De forma general, hombres y mujeres informan altos niveles de satisfacción sexual, no existiendo diferencias de género estadísticamente significativas.
4. No hay diferencias estadísticamente significativas en los niveles de satisfacción sexual entre personas con orientación heterosexual y homosexual.
5. El Modelo de Intercambio Interpersonal de Satisfacción Sexual (*Interpersonal Exchange Model of Sexual Satisfaction*, IEMSS) es un modelo teórico válido para el estudio de la satisfacción sexual en parejas heterosexuales españolas.
6. La satisfacción sexual de los hombres, examinada bajo el IEMSS, es predicha por la satisfacción con la relación, balance de beneficios y costes sexuales, y nivel comparativo de beneficios y costes sexuales. En las mujeres, además de estos componentes, la igualdad de costes sexuales, y el balance de beneficios y costes sexuales de la pareja son predictores de su satisfacción sexual.
7. Es importante tener en cuenta los efectos diádicos, ya que al menos en el caso de las mujeres su satisfacción sexual no solo depende de sus propias experiencias, sino también de las experiencias de su pareja.
8. Variables individuales (actitudes sexuales), interpersonales (satisfacción con la relación, funcionamiento sexual y asertividad sexual), sociales (apoyo social y nivel socioeconómico) y culturales (religión, práctica religiosa e ideología política) son variables que de manera indirecta o directa predicen la satisfacción sexual de hombres y mujeres heterosexuales españoles.

9. La satisfacción con la relación constituye una de las variables más relevantes para predecir la satisfacción sexual y parece tener un rol central al funcionar como variable mediadora entre diversas variables (apoyo social, en hombres y mujeres; e ingresos anuales y asertividad sexual de inicio en hombres) y la satisfacción sexual.

CONCLUSIONS

Conclusions

1. The Spanish adaptation of the Interpersonal Exchange Model of Sexual Satisfaction Questionnaire (IEMSSQ) overcomes limitations associated with other assessment instruments. This questionnaire is based on a theoretical model developed to explain the sexual satisfaction, so it does not include predictor items of sexual satisfaction, and it has adequate indices of reliability and validity.
2. Socio-demographic variables such as age and education level, variables of physical and psychological health, and interpersonal variables such as relationship satisfaction, the length of the relationship and the kind of relationship are associated with sexual satisfaction.
3. In general, men and women report high levels of sexual satisfaction, with no statistically significant gender differences.
4. There are no statistically significant differences in levels of sexual satisfaction among people with heterosexual and homosexual orientation.
5. The Interpersonal Exchange Model of Sexual Satisfaction (IEMSS) is a valid theoretical model for the study of sexual satisfaction in Spanish heterosexual couples.
6. Men's sexual satisfaction, examined through the IEMSS, is predicted by relationship satisfaction, balance of sexual rewards and costs, and comparison level of sexual rewards and costs. In women, in addition to these components, equality of sexual costs, and their partner's balance of sexual rewards and costs are predictors of sexual satisfaction.
7. It is important to consider dyadic effects because at least in the case of women, their sexual satisfaction depends not just on their own experiences, but also on the experiences of their partner.
8. Individual (sexual attitudes), interpersonal (relationship satisfaction, sexual function and sexual assertiveness), social (social support and socioeconomic status), and cultural variables (religion, religious practice, and political ideology) are variables that indirectly or directly predict sexual satisfaction in a heterosexual Spanish men and women.

9. Relationship satisfaction constitutes one of the most relevant variables to predict sexual satisfaction, and it appears to have a central role operating as a mediating variable between different variables (social support in men and women; and annual income and initiation sexual assertiveness in men) and sexual satisfaction.

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ANEXOS

Interpersonal Exchange Model of Sexual Satisfaction Questionnaire (IEMSSQ)

Global Measure of Sexual Satisfaction **(GMSEX)**

De forma general, ¿cómo describiría su relación sexual con su pareja?

1. Muy mala…	1	2	3	5	6	7	…Muy buena
2. Muy poco placentera…	1	2	3	5	6	7	…Muy placentera
3. Muy negativa…	1	2	3	5	6	7	…Muy positiva
4. Muy insatisfactoria…	1	2	3	5	6	7	…Muy satisfactoria
5. Muy poco valiosa…	1	2	3	5	6	7	…Muy valiosa

Global Measure of Relationship Satisfaction **(GMREL)**

De forma general, ¿cómo describiría su relación de pareja?

1. Muy mala…	1	2	3	5	6	7	…Muy buena
2. Muy poco placentera…	1	2	3	5	6	7	…Muy placentera
3. Muy negativa…	1	2	3	5	6	7	…Muy positiva
4. Muy insatisfactoria…	1	2	3	5	6	7	…Muy satisfactoria
5. Muy poco valiosa…	1	2	3	5	6	7	…Muy valiosa

***Exchange Questionnaire* (EQ)**

Cuando las personas piensan en sus relaciones sexuales de pareja la mayoría puede hacerlo en forma de **beneficios** y **costes** de esas relaciones sexuales. Los beneficios son aspectos positivos o placenteros de la relación sexual (lo que les gusta); los costes son aspectos negativos o no placenteros (lo que no les gusta).

1. Piense en los beneficios que ha obtenido en sus relaciones sexuales con su pareja en los últimos 3 meses. ¿En qué grado/nivel han sido beneficiosas sus relaciones sexuales con su pareja?

Nada beneficiosas…	1	2	3	4	5	6	7	8	9	…Muy beneficiosas

2. La mayoría de las personas tienen expectativas acerca de lo beneficiosas que "esperan que sean" sus relaciones sexuales. En relación con estas expectativas pueden pensar que sus relaciones sexuales son más, menos o igual de beneficiosas de lo que "esperan". Basándose en sus propias expectativas acerca de lo beneficiosas que "espera que sean" sus relaciones sexuales con su pareja, ¿en qué grado/nivel son beneficiosas sus relaciones sexuales en comparación con estas expectativas?

Mucho menos beneficiosas de los que espera…	1	2	3	4	5	6	7	8	9	…Mucho más beneficiosas de lo que espera

3. ¿Cómo es el nivel de beneficios que obtiene en sus relaciones sexuales con su pareja en comparación con le nivel de beneficios que obtiene su pareja?

Mis beneficios son mucho mayores…	1	2	3	4	5	6	7	8	9	…Los beneficios de mi pareja son mucho mayores

4. Piense ahora en los costes que ha obtenido en sus relaciones sexuales con su pareja en los últimos 3 meses. ¿En qué grado/nivel han sido costosas sus relaciones sexuales con su pareja?

Nada costosas…	1	2	3	4	5	6	7	8	9	…Muy costosas

5. La mayoría de las personas tienen expectativas acerca de los costosas que "esperan que sean" sus relaciones sexuales. En relación con estas expectativas pueden pensar que sus relaciones sexuales son más, menos o igual de costosas de lo que "esperan". Basándose en sus propias expectativas acerca de lo costosas que "espera que sean" sus relaciones sexuales con su pareja, ¿en qué grado/nivel son costosas sus relaciones sexuales en comparación con esas expectativas?

Mucho menos costosas de lo que espera…	1	2	3	4	5	6	7	8	9	…Mucho más costosas de lo que espera

6. ¿Cómo es el nivel de costes que tiene en sus relaciones sexuales con su pareja en comparación con le nivel de costes de su pareja?

Mis costes son mucho mayores…	1	2	3	4	5	6	7	8	9	…Los costes de mi pareja son mucho mayores

Listado de Beneficios/Costes

Instrucciones. A continuación encontrará algunas preguntas acerca de sus relaciones sexuales con su pareja. Antes de responder es muy importante que lea con atención la siguiente información.

Cuando las personas piensan en sus relaciones sexuales con su pareja, la mayoría pueden dar ejemplos concretos sobre aspectos positivos o placenteros que les gustan: son **beneficios**. Asimismo, la mayoría de las personas también pueden dar ejemplos de aspectos negativos o nada placenteros que les disgustan en sus relaciones sexuales: son **costes**.
Por ejemplo, el sexo oral sería un **beneficio** si usted cree que practica esta actividad sexual con la frecuencia "deseada" y la disfruta, pero podría ser un **coste** si a usted le gustaría practicarlo más a menudo o de forma menos frecuente de lo que lo hace, o si no lo disfruta.
Tenga en cuenta que estos elementos pueden ser beneficios y costes al mismo tiempo; por ejemplo, el sexo oral podría ser tanto un beneficios como un coste si lo disfruta cuando lo practica, pero le gustaría practicarlo más a menudo. De la misma forma, algunos de estos elementos podrían no ser un coste ni un beneficios en sus relaciones sexuales.

A continuación encontrará una lista de beneficios y costes que muchas personas experimentan en sus relaciones sexuales. Por favor indique si cada uno de los enunciados es, de forma general, un **beneficio** o un **coste** en sus relaciones sexuales con su pareja de la siguiente forma:

En cada uno de los enunciados sexuales con una X…

- BEN, si el enunciado representa un **beneficio** en sus relaciones sexuales con su pareja.
- COS, si el enunciado supone un **coste** en sus relaciones sexuales con su pareja.
- BEN y COS, si el enunciado representa al mismo tiempo un **beneficio** y un **coste**.
- Si el enunciado no supone ni un **beneficio** ni un **coste** no señale nada (déjelo en blanco).

Recuerde, si es algo positivo, placentero o "adecuado" es un **beneficio**; si es negativo, nada placentero o sucede "muy poco o demasiado" es un **coste**.

		BEN	COS
1	Nivel de afectividad que usted y su pareja manifiestan durante sus relaciones sexuales		
2	Grado/nivel de intimidad emocional (sentimientos de cercanía, intercambio de sentimientos)		
3	Grado/nivel en que usted y su pareja hablan de sexo		
4	Variedad en las actividades sexuales, lugares u horas para practicar sexo		
5	Uso de juguetes sexuales por usted y su pareja		
6	Actividades sexuales realizadas por cada uno para excitar al otro		
7	Frecuencia con la que usted experimenta orgasmos		
8	Frecuencia con la que su pareja experimenta orgasmos		
9	Grado/nivel en el que usted y su pareja participan en actividades íntimas (conversaciones, abrazos, etc.) después del sexo		
10	Frecuencia de actividades sexuales		
11	Intimidad que usted y su pareja tienen para el sexo		
12	Sexo oral: grado en el que su pareja le estimula		
13	Sexo oral: grado en el que usted estimula a su pareja		
14	Sensaciones físicas que obtiene con las caricias o abrazos		
15	Sentimientos de malestar físico o dolor durante o después del sexo		
16	Grado/nivel en que se divierten usted y su pareja en los contactos sexuales		
17	Quién inicia los contactos sexuales		
18	Nivel de estrés/relajación que siente durante sus contactos sexuales		
19	Nivel en el que usted y su pareja manifiestan su disfrute durante los contactos sexuales		
20	Nivel de comunicación acerca de lo que les gusta o disgusta en materia de sexo		
21	Capacidad/incapacidad para tener un hijo		
22	Grado/nivel en que participan en juegos o fantasías sexuales		
23	Sensaciones durante y después de los contactos sexuales con su pareja		
24	Grado/nivel de consideración de su pareja hacia sus gustos, necesidades o sentimientos		
25	Trato de su pareja (verbal y físico) cuando practican sexo		
26	Practicar sexo cuando no le apetece		
27	Practicar sexo cuando a su pareja no le apetece		
28	Grado/nivel en el que confía en su pareja		
29	Grado/nivel en el que su pareja confía en usted		
30	Método de protección (contra las infecciones de transmisión sexual o el embarazo) que usan		
31	Grado/nivel en que hablan de los métodos de protección (contra las infecciones de transmisión sexual o el embarazo) y los utilizan		
32	Grado/nivel de comodidad que sienten el uno con el otro		
33	Grado/nivel o forma en que su pareja le convence para tener contactos sexuales		
34	Grado/nivel en que usted y su pareja discuten después de un contacto sexual		
35	Grado/nivel en el que usted y su pareja son una pareja exclusiva		

	(p.ej., solo mantienen relaciones sexuales entre ustedes)		
36	Tiempo que pasan practicando actividades sexuales		
37	Su facilidad para tener un orgasmo		
38	Facilidad de su pareja para tener un orgasmo		
39	Grado/nivel en que su relación sexual de pareja refleja o rompe los roles sexuales estereotipados (la forma en que se supone que hombres y mujeres deben comportarse sexualmente)		
40	Respuesta de su pareja a sus propuestas de inicio de actividad sexual		
41	Estar desnudo delante de su pareja		
42	Estar su pareja desnuda delante de usted		
43	Grado/nivel en que su pareja habla a otras personas sobre la vida sexual de ustedes		
44	Grado/nivel en que leen o ven material sexual explícito (relatos eróticos, vídeos pornográficos)		
45	Satisfacer/tratar de satisfacer a su pareja		
46	Grado/nivel en que las relaciones sexuales con su pareja le hacen sentir seguro en su relación		
47	Grado/nivel de excitación que usted alcanza		
48	Grado/nivel de espontaneidad en su vida sexual		
49	Grado/nivel de control que siente durante/después de sus contactos sexuales		
50	Grado/nivel en que participa en actividades sexuales que le disgustan pero que gustan a su pareja		
51	Grado/nivel en que participa en actividades sexuales que les gustan pero que disgustan a su pareja		
52	Preocupación acerca de que usted o su pareja se contagien el uno al otro con una infección de transmisión sexual		
53	Grado/nivel en que se considera usted capaz de satisfacer sexualmente a su pareja		
54	Grado/nivel en que usted y su pareja practican sexo o juegos anales		
55	Habilidad de su pareja para satisfacerle sexualmente		
56	Grado/nivel en que piensa que su pareja se siente físicamente atraída por usted o le desea sexualmente		
57	Grado/nivel en que se siente físicamente atraído por su pareja o la desea sexualmente		
58	Grado/nivel en que usted y su pareja son sexualmente compatibles (están de acuerdo en lo que les gusta/disgusta sexualmente)		

Artículos publicados que forman parte de la Tesis Doctoral (se incluye solo la primera página)

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THEORETICAL ARTICLE

A systematic review of sexual satisfaction

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KEYWORDS
Sexual satisfaction;
Human sexuality;
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Theoretical study

Abstract The present theoretical study is a systematic review of research publications in which sexual satisfaction was the dependent variable. After conducting a literature search in major electronic databases and following a selection process, we provide a summary of the main findings of 197 scientific papers published between 1979 and 2012. The review revealed the complexity and importance of sexual satisfaction, which was associated with the following variables and factors: a) individual variables such as socio-demographic and psychological characteristics as well as physical and psychological health status; b) variables associated with intimate relationships and sexual response; c) factors related to social support and family relationships; and d) cultural beliefs and values such as religion. In conclusion, we observed that sexual satisfaction is a key factor in individuals' sexual health and overall well-being. However, despite its importance, there is a lack of theoretical models combining the most important factors to explain sexual satisfaction.
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PALABRAS CLAVE
Satisfacción sexual;
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Revisión sistemática;
Estudio teórico

Resumen En el presente estudio teórico se realiza una revisión sistemática de investigaciones publicadas en las que la satisfacción sexual constituye la variable dependiente. Tras una búsqueda bibliográfica en las principales bases de datos electrónicas, y una vez realizado un proceso de selección, se resumen los principales resultados de 197 artículos científicos publicados entre 1979 y 2012. Se comprueba la complejidad y la relevancia de la satisfacción sexual, la cual se asocia con: a) variables individuales, como ciertas características socio-demográficas, psicológicas, así como con el estado de salud físico y psicológico; b) variables vinculadas con la relación de pareja y con la respuesta sexual; c) factores relacionados con el apoyo social y relaciones familiares; y d) creencias y valores culturales como la religión. Como conclusión se puede señalar que la satisfacción sexual constituye un factor clave, tanto de la salud sexual como del

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Validation of the Interpersonal Exchange Model of Sexual Satisfaction Questionnaire in a Spanish Sample

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The Interpersonal Exchange Model of Sexual Satisfaction Questionnaire (IEMSSQ) contains a number of separate measures that, together, have been useful in enhancing understanding of sexual satisfaction because it is based on a validated theoretical framework and has good psychometric properties. The present study aimed to determine the psychometric properties of the IEMSSQ in a Spanish sample of 520 men and 701 women in a mixed-sex relationship. Participants completed Spanish translations of the IEMSSQ, the Index of Sexual Satisfaction, the Dyadic Adjustment Scale, and the Massachusetts General Hospital–Sexual Functioning Questionnaire. The results showed that the Spanish IEMSSQ has good psychometric properties. Internal consistency values were excellent. For the most part, test-retest reliabilities were good, except for the equality components, for which they were moderate. Consistent with predictions, the various subscales were correlated with scores on sexual satisfaction, dyadic adjustment, and sexual functioning, demonstrating good concurrent and convergent validity. The applicability of the IEMSSQ for use with Spanish speakers in clinical and research settings is discussed.

Sexual satisfaction is an important aspect of people's lives and has been shown to be closely related to their relationship satisfaction, sexual functioning, and quality of life (Byers, 2005; Byers & Rehman, 2014; Sánchez-Fuentes, Santos-Iglesias, & Sierra, 2014; Ventegodt, 1998). To fully understand factors affecting sexual satisfaction (and human sexuality in general), it is important that research be guided by theory (Byers, 1999; Lawrance & Byers, 1995; Öberg, Fugl-Meyer, & Fugl-Meyer, 2002; Sprecher & Cate, 2004; Stulhofer, Busko, & Brouillard, 2010). The Interpersonal Exchange Model of Sexual Satisfaction (IEMSS; Lawrance & Byers, 1992) is a well-validated theoretical framework developed to explain and understand sexual satisfaction within relationships. The Interpersonal Exchange Model of Sexual Satisfaction Questionnaire (IEMSSQ; Lawrance, Byers, & Cohen, 2011) was developed within the framework of the IEMSS to provide measures that corresponded to the proposed conceptual definition of sexual satisfaction (i.e., an affective response arising from one's subjective evaluation of the positive and negative dimensions associated with one's sexual relationship; Lawrance & Byers, 1995, p. 268) as well as the components proposed in the model to result in higher sexual satisfaction.

There has been little research investigating sexual satisfaction in Spanish-speaking countries. What research has been done has not been based on theory and has used poor measures (e.g., Castellanos-Torres, Álvarez-Dardet, Ruiz-Muñoz, & Pérez, 2013; Ministerio de Sanidad y Política Social, 2009; Sierra, Vallejo-Medina, Santos-Iglesias, & Lameiras Fernández, 2012), leading to some conflicting findings about the sexual satisfaction of Spanish individuals and couples. Thus, little is known about the sexual satisfaction of Spanish speakers in any country and/or the factors affecting sexual satisfaction. However, it has been recognized that culture affects sexual function (Brotto, Chik, Ryder, Gorzalka, & Seal, 2005), and the results of research in other countries may not be generalizable to Spanish people. Therefore,

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Sexual satisfaction in a heterosexual and homosexual Spanish sample: the role of socio-demographic characteristics, health indicators, and relational factors

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The aim of the present study was to explore the relationship between (1) sexual satisfaction and (2) socio-demographic variables, health status, and relational factors in Spanish men and women. Using a quota sampling method, we assessed 2024 subjects aged between 18 and 80 years old with a socio-demographic questionnaire, the Global Measure of Sexual Satisfaction, the Global Measure of Relationship Satisfaction, the Short Form-36 Health Survey, and the Symptom Assessment-45 Questionnaire. Regarding the results, no significant differences in sexual satisfaction were found according to gender or sexual orientation. At the bivariate level, sexual satisfaction was negatively correlated with age, low education level, psychopathological symptoms, and length of relationship, and positively correlated with better physical health and relationship satisfaction. In heterosexual individuals, 55% of the variance in sexual satisfaction was predicted by vitality, depression, relationship satisfaction, length of relationship, and type of relationship. In homosexual individuals, bodily pain and relationship satisfaction predicted 44% of the variance in sexual satisfaction. Finally, the impact of health and relational variables on the sexual well-being of adults in the context of sex therapy is discussed.

Keywords: sexual satisfaction; relationship satisfaction; physical and psychological health

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Introduction

Sexual health is not just the absence of disease or dysfunction but rather a state of physical, mental, and social well-being related to sexuality. Therefore, sexual satisfaction is a key factor of sexual health that is regarded as a right by the World Health Organization (2010) and as a predictor of quality of life (Robinson & Molzahn, 2007). Sexual satisfaction has been associated with several variables: demographic characteristics (e.g., gender, age, sexual orientation, education level, number of sexual partners), individual variables (e.g., physical and psychological health status), and relational variables (e.g., satisfaction with the relationship, length and type of relationship) (Sánchez-Fuentes, Santos-Iglesias, & Sierra, 2014).

Regarding the role of gender, research has yielded contradictory results. Some studies have found that men report greater sexual satisfaction than women (Carpenter, Nathanson, & Kim, 2009; Petersen & Hyde, 2010); others have concluded that women are more sexually satisfied (Ojanlatva, Helenius, Rautava, Ahvenainen, & Koskenvuo, 2003; Rehman,

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Sexual Satisfaction in Spanish Heterosexual Couples: Testing the Interpersonal Exchange Model of Sexual Satisfaction

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The study of sexual satisfaction in Spain is scarce and has proceeded atheoretically. This study aimed at examining sexual satisfaction in 197 Spanish heterosexual couples based on the Interpersonal Exchange Model of Sexual Satisfaction. Men and women reported equal satisfaction. Men's sexual satisfaction was predicted by their own relationship satisfaction, balance of sexual rewards and costs, and comparison level of sexual rewards and costs. Women's sexual satisfaction was predicted by their own relationship satisfaction, balance of sexual rewards and costs, comparison level of sexual rewards and costs, equality of sexual costs, and their partner's balance of sexual rewards and costs. These results provide with a better understanding of the mechanisms that explain sexual satisfaction in Spanish couples. Implications for research and therapy are discussed.

Sexual satisfaction is an important component in daily life since it is associated with positive outcomes, such as enhanced relationship satisfaction (Holmberg, Blair, & Philips, 2010), physical and psychological health (Laumann et al., 2006; Tower & Krasner, 2006), and overall well-being and quality of life (Byers & Rehman, 2014; Stephenson & Meston, 2011; Thompson et al., 2011). The Interpersonal Exchange Model of Sexual Satisfaction (IEMSS; Lawrance & Byers, 1992, 1995) was created within the context of the Social Exchange Theory (Thibaut & Kelley, 1959). This model provides an effective conceptual framework for understanding and explaining sexual satisfaction within relationships (Byers & Rehman, 2014; Peck, Shaffer, & Williamson, 2005), as it focuses on a series of theory-driven interpersonal sexual and nonsexual variables that have been shown to account for more than 70% of the variance in sexual satisfaction, and it is robust to the effects of gender, child status, length of the relationship, and self-disclosure (Byers & MacNeil, 2006; Byers & Rehman, 2014; Lawrance & Byers, 1995). It also has the advantage of overcoming the methodological limitations in previous research (Lawrance & Byers, 1995; Mark, Herbenick, Fortenberry, Sanders, & Reece, 2014), such as the predictor-criterion overlap (i.e., a measure assesses constructs that are predicted or are predictors of sexual satisfaction; Mark et al., 2014) or

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