

Medical television series as a means to educate the public on nutrition and healthy eating

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Abstract: This article presents the results of an extensive content analysis of nineteen USA medical television series broadcast in Spain in the last twenty years. The analysis of the medical series focuses on establishing their potential to educate the public on nutrition and healthy eating. The reason to study USA productions is based on two reasons: because these productions are exported worldwide and the USA has high rates of obesity, which could be reduced with prevention and nutritional education on the small screen. The interest for this analysis originated in a doctoral thesis, defended in July 2010.

Keywords: TV series; medical television series; nutrition; obesity; eating-related health problems.

Summary: 1. Introduction. 2. Methodology. 3. Procedure. 4. Results. 4.1. Results on health workers' nutrition. 4.2. Results on patients' nutrition. 4.3. Results on eating-related health problems. 5. Conclusions. 6. References.

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1. Introduction

The purpose of this research is to analyse and compare a sample of medical television series in order to identify those protagonists, plots and dialogues containing important ideas about nutrition and healthy eating. The representation of eating habits on television is not reduced to cooking programmes and gastronomic news stories. Viewers can also receive education on eating habits from their favourite format. Eating habits are represented on all types of programmes, from specialised, realistic and day-time programmes to more popular, fictional, primetime and internationally-appealing programming. From the bagels and American coffee of *Northern Exposure* (1990), to the diet advice for organ transplant recipients in *Three Rivers* (2010), there is a wide spectrum of characters. Their eating habits may be of interest to real health workers, politicians and, of course, citizens. The protagonists become friends, confidants and almost relatives of the audience, who connects with them emotionally. For this reason,

viewers will imitate what they watch on TV. Television series feed on reality, in all senses, and then return this inspiration and, in doing so, they influence the real world.

To demonstrate this point, this study will analyse the nineteen USA medical television series (i.e. those featuring doctors and health workers) that were premiered in Spanish between 1990 and 2010. This first analysis is based on an in-depth research work conducted for a doctoral thesis entitled *Las series de televisión sobre médicos (1990 – 2010): tres enfoques. Comunicación Interpersonal; Comunicación Institucional; Relaciones entre Ética, Moral y Política* (Television medical series (1990-2010): three approaches. Interpersonal Communication; Institutional Communication; Relations between Ethics, Morality and Politics). This thesis was defended in the School of Information Sciences of the Complutense University of Madrid, in July 2010. Nutrition and healthy eating were not an essential part of the thesis's analysis, but it provided a bibliographical source that opened up a new field of research, which was developed after the defence of the thesis. The analysis of the series' characters, plots, dialogues, diseases and medical crisis focuses on the representation of gastronomy, nutrition, obesity, and other eating-related topics.

The choice of the research subject is based on the prolonged success of fictional television medical series. The first of them, *Dr. Christian*, premiered in Spain in 1956. It was an USA production that only lasted 15 episodes. Since then, dozens of drama and comedy medical series have been created in many countries. Their ratings are very high. Some series such as *Grey's Anatomy*, *Private Practice*, *House*, *Nip/Tuck* and *Nurse Jackie* have become the most popular in their country of origin, the USA. Their success is repeated simultaneously in the other countries that have bought the broadcasting rights, like Spain.

In addition, specialised literature on the subject is almost non-existent and the few published books are not rigorous and only offer inventories of fictional productions. There is a huge lack of literature on medical series and on the nutritional education they can provide. The previous points justify the relevance of this study. The aim is to use the success of this TV genre and elucidate how they can influence viewers' eating habits and open new avenues of knowledge and education on nutrition.

This research is also topical thanks to the current golden age of fictional television, “with big productions that match cinema in many aspects, like the quality of photography and the complexity of plots and characters” (Bonaut and Grandío, 2009: 754). The prolonged success of the medical series is even more palpable in this golden age. The study also aims to show the new role of the small screen, “beyond the classical economic and critical theories” (Danta, 2009: 572). Television does not only contain political, economic, sociological or consumption messages. Despite “nobody seems to

acknowledge the role of television in the direct generation of value” (Danta, 2009: 572), this research will demonstrate that television transmits healthy ideas and habits and, particularly, provides education on the value of healthy nutritional habits and the caring of life.

2. Methodology

This research is based on an analytical procedure. The first exploratory step focuses on establishing the list of medical series produced from 1990 to 2010. The second step includes the analysis of all the first-season episodes of the chosen series. Finally, the content of these episodes is interpreted with a quantitative and qualitative analysis.

The theoretical framework of this study is based on Ole R. Holsti’s 1969 book, which in our opinion is still the best in its field, and other specialised primary sources (books, articles and news). The content analysis is based on several theoretical frameworks: Eric Berne’s transactional analysis; Carl Gustav Jung’s psychological types; the theory of public events of Harvey Molotch and Marilyn Lester; Ray Eldon-Hiebert’s communication strategies, which in our opinion are the best reference in their field; Gustavo Bueno’s definition of ethics, morality and politics; and Silverio Sánchez-Corredera’s classification of the dependency relationships between ethics, morality and politics (2003: 41-45).

Based on that theoretical framework, this research is focused on analysing the representation of nutrition and eating habits among doctors and their patients, and the public problems and crises related to the consumption of food and drinks in the sample of medical series.

At the same time, the study covers two decades of broadcasts. The following section lists the series to be analysed, and shows their broadcast years in the USA and their premiere date in Spain (in parentheses). These series are analysed and cited according to their premiere date in the USA because their international broadcast is irregular and inconsistent:

Northern Exposure: 1990-1995 (12 July, 1990).

Dr. Quinn: 1993-1998 (1 January, 1993).

Chicago Hope: 1994-2000 (18 September, 1994).

ER: 1994-2009 (19 September, 1994).

Becker: 1998-2004 (2 November, 1998).

Strong Medicine: 2000-2006 (23, July, 2000).

Doc: 2001-2004 (11 March, 2001).

Scrubs: 2001-2010 (2 October, 2001).

Nip/Tuck: 2003-2010 (22 July, 2003).
House M.D.: 2004-2010 (16 November, 2004).
Grey's Anatomy: 2005-2010 (27 March, 2005).
Saved: 2006 (12 June, 2006).
3 lbs: 2006 (14 November, 2006).
Private Practice: 2007-2010 (19 September, 2007).
Mental: 2009 (4 June, 2009).
Nurse Jackie: 2009-2010 (8 April, 2010).
Mercy: 2009-2010 (25 November, 2009).
Trauma: 2009-2010 (24 November, 2009).
Three Rivers: 2009 (8 April, 2010).

Eighty-nine medical characters have been analysed: male and female doctors and nurses, porters and emergency physicians. Only their first season of each series was analysed. This sample of material includes the series' pilot episodes, which explain the main plots and the key features of the characters, and the first episodes, which developed the premise of each project. The success or failure of the series can force producers to change the tone, themes and even the original characters. Therefore, it is appropriate to focus the analysis only in the first season. This measure prevents the investigation from being diffuse, too ambitious or unpractical, due to an excessive number of episodes. At the same time, this sample ensures a clear, balanced and thoughtful exploration. It is important to highlight that all the selected series are set in hospitals and feature health workers and patients. Those series that only present private consultations outside a hospital or clinic were dismissed because they contain little information about the subject under study.

In order to understand the procedure and the results it is necessary to briefly summarise each one of the selected series, their main plots, and production details:

Northern Exposure (Spanish title: *Doctor en Alaska*): Its protagonist is Joel Fleischman, a newly graduated Jewish doctor, from Columbia University. He did his residency at New York's Ben Zion Hospital and has one of the best records of his class. He must pay back a 120,000 dollars scholarship grant he received from the State of Alaska in the next four years. The series premiered on 12 July, 1990, on CBS. It won almost 30 television awards including two Golden Globes for best drama series and seven Emmy Awards in the categories of outstanding drama series, script, sound editing, and supporting actress, among others. Its last episode was broadcast on 26 July, 1995. The series ended because its ratings decreased dramatically after the actor who played the male protagonist, Rob Morrow, left the project to try his luck in the film industry.

Dr. Quinn, Medicine Woman (Spanish title: *La doctora Quinn*): Its protagonist is Dr. Michaela Quinn, a Boston-born woman who comes from a wealthy family and has inherited her father's love for the medical profession. She graduated with honours but when his father dies nobody wants to hire her because in 1867, the time when the story is set, hospitals and clinics only hired women to work as nurses. Everything changes when Michaela applies for the position of doctor at Colorado Springs Hospital and is accepted because the recruiter thinks she is a man due to her male nickname: Mike. The series premiered on 1 January, 1993, in the USA. It was produced by CBS and the Sullivan Company, distributed by CBS, and exploited on VHS and DVD by A&E Home Video.

Chicago Hope: It premiered on the USA on September 18, 1994, the day before the premiered of what would be its main competition: *ER*. Both series competed for the audience as they both were aired on Thursdays at the same hour. It can be said that the battle was initially won by *Chicago Hope*. It ended on its sixth season, on 4 May, 2000. It combined drama, mystery and action. The personal plots of the doctors were unexplored in the first episodes. However, gradually, the human side, family, and love secrets of the health workers started to be explored. This decision contributed to the series success in countries as different as Australia, Argentina and Great Britain. The series won 21 television awards and was nominated for dozens of other awards.

ER (Spanish title: *Urgencias*): Within period under study, this is the most famous medical series and also the most cited by the public and scholars. It premiered on 19 September, 1994. This series ran for 15 seasons until 2 April, 2009. It was created by Michael Crichton and executively produced by Steven Spielberg. Michael Crichton is known for his novels, but before focusing on film and television he studied medicine at Harvard University and paid his career by writing novels under various pseudonyms. The name of the series describes its main setting: the emergency room of Chicago's County General Hospital. All the action takes place in the hospital's corridors and operating rooms. The protagonists' homes are only briefly shown.

Becker: It premiered on 2 November, 1998, in the USA. It was produced by Dave Hackel Productions, Industry Entertainment and Paramount Network Television Productions, which also produced *Cheers*. This series was aired by the CBS Network and made Ted Danson famous for its role of Sam Malone. When the series ended, the producer wanted to take advantage of the public's love for the leading actor and created another series to showcase his talents. From a bar in Boston to a free clinic in New York, Sam Malone became the sullen and bad-tempered doctor John Becker. As expected, the new series pulled good ratings but failed to last for long. It never exceeded 15 million viewers and was cancelled on 18 January, 2004.

Strong Medicine (Spanish title: *Doctoras de Filadelfia*): Like *Dr. Quinn*, this series also centred on female doctors, with the exception that they were gynaecologists. Arguably, it was the most feminist series of the whole sample. It premiered on 23 July, 2000, and was suspended on 6 February, 2006. The audience levels were good in its first season and decent in the last years. The reason is that one of its producers and guest actresses was Whoopi Goldberg, from such popular films as *Ghost*, *Sister Act*, *Eddie and Girl*, *interrupted*, all of which were released before this series. The actress gave life to the renowned doctor Lydia Emerson during the first four episodes, which pulled an important number of viewers, who remained loyal after the character disappeared. However, Whoopi Goldberg continued being part of the production through her company Lil' Whoop Productions.

DOC: This modest series, produced by Pebblehut Productions, was first aired on 11 March, 2001. It was created by the Buffalo-born Johnson brothers, Dave Alan and Gary R. The producers' origin is important because the series' protagonist is an authentic cowboy, who comes from another cattle state (Montana). The protagonist is a practicing Christian and fits all the stereotypes of the province man dragged to the big city. *DOC* is completely opposite to *Northern Exposure*, where the protagonist takes the opposite journey from the city to the countryside. This doctor-outside-his-habitat situation is the main premise at the start of the series.

Scrubs: After *ER*, this is the second longest-running series in the sample. It premiered on 2 October, 2001, and lasted 9 seasons, until 17 March, 2010. It is a sitcom with 22-24-minute-long episodes, with few sets, filmed with a single camera, and full of gags and canned laughter. In terms of content, it is another series about young doctors with good yet crazy mentors. The action takes place in the fictional Sacred Heart Hospital and begins with the arrival of a group of newly graduated doctors. These young doctors are as extravagant and peculiar as their mentors and this ensures laughs from the first minute.

Nip/Tuck: This is the crudest and most irreverent and violent series from the sample. It premiered on the USA on July 22, 2003. Its creator is Ryan Murphy, who took advantage of the success of *Nip/Tuck* to launch another hit show: *Glee*. The protagonists of *Nip/Tuck* practice plastic surgery, a specialty that had been explored only sporadically in other series (*Chicago Hope*, *ER*). These plastic surgeons commit many crimes: murder, theft, trespass, concealment of evidence, collaboration with drug traffickers, etc. The surgical interventions in this series are more realistic than ever as the writers work closely with the teams of medical consultants, makeup and prosthetics. Due to these features the series was forced to display the warning message: "not recommended for people under 18 years of age". This warning, however, did not stop millions of people from watching *Nip/Tuck* during the seven seasons it lasted.

House M.D.: Premiered on 16 November, 2004, and is currently in its eighth and final season. The series has been extensively studied by Valbuena (2009: 160), who points out its origins: Sherlock Holmes. According to the author, Paul Attanasio took the idea from “The Diagnosis Column”, published by *The New York Times Magazine*, and later shared it with producer David Shore to turn it into a TV series. They needed a protagonist who was a doctor and a detective at the same time; hence their inspiration on the character created by novelist Arthur Conan-Doyle, in 1887. Sherlock Holmes was addicted to cocaine, while House is addicted to Vicodin. Both characters have a friend and confidant: Watson and Wilson, respectively (Valbuena, 2009: 160). Moreover, both characters live in apartments with the same number (221b) and play a musical instrument when they are alone: the detective plays violin and House the piano and guitar.

Grey’s Anatomy (Spanish title: *Anatomía de Grey*): It premiered on March 27, 2005, and is currently on its eighth season. This series, which is not recommended for people under 14 years of age, became another success for the ABC network. The series mixes medicine, love, jealousy, adultery, parents-children relations, and life learning situations at Seattle’s Grace Hospital. There are more than one dozen protagonists all of whom participate in the main plots. However, the most important character after whom the series is named is Meredith Grey, a surgeon apprentice and daughter of a prestigious surgeon who suffers Alzheimer.

Saved: Its protagonists are two ambulance nurses, Wyatt and Sack. Unlike in Spain, in the USA doctors are not obliged to travel in ambulances. The series was an idea of David Manson, a screenwriter and producer of many series that have won several Emmy and Golden Globe Awards: *John Doe*, *Big love*, *New Amsterdam*, and *Life*. The first two were among the most-watched series in 2010. However, *Saved* did not have the same fortune and was cancelled after the first season, of 13 episodes. It premiered on 12 June, 2006, and ended on 4 September of the same year. However, like previous series, it set precedents for the new productions, in this case, in the protagonism given to paramedics, which was also used in *Trauma*.

3 lbs. (Spanish title: *3 libras*): It is the shortest running series in the sample. It was a major bet by CBS in collaboration with The Levinson/Fontana Company. It premiered on 14 November, 2006, and only lasted 8 episodes. Despite this, it was broadcast in the UK, Hungary, Holland, Estonia and Spain, where the Cuatro network aired it in the early hours of Thursday, after two episodes of *Grey’s Anatomy*. However, *3 lbs* was not well received by the audience for a very clear reason: its protagonist, Doctor Hanson, was a copy of doctor House. To exaggerate the copy, it was made clear from the start that Hanson is a neurologist with a brain tumour because he suffers from visions. The viewer shares his perspectives from a subjective position of the camera. However, there was only

one place for a great, petulant and sick doctor. House won the battle for being the most original and *3 lbs* was quickly ended.

Private Practice (Spanish title: *Sin cita previa*): It is the only spin-off series within the sample that coincides in success with its predecessor. Dr. Addison Montgomery left *Grey's Anatomy* to have her own series. This character moves from a large hospital in Seattle to a small naturalist clinic in the beach of Los Angeles. In the real world, it was the former husband of the leading actress, an ABC executive, who suggested to Shonda Rimes to create a new series of the level of *Grey's Anatomy*. *Private Practice* was also produced by Rimes's company, Shondaland, and was aimed to showcase Kate Walsh as a leading actress. The public accepted the production, which is already in its fifth season.

Mental: This series premiered on 26 May, 2009, in the USA, and ended on 14 August, 2009, after only 13 episodes. Fox Television Studios produced the series and exported it to Greece, Japan, Colombia and Spain, where it has been aired by Fox and Antena 3. The success of its leading actor, Chris Vance, known by his role as James Whistler in the successful *Prison Break*, was not enough to make the series succeed. In fact, after the end of *Mental*, the actor quickly went to act in the new series *Burn notice* (Spanish title: *Último aviso*), which was also produced by Fox and where he portrays the character Mason Gilroy. The new series is currently in its sixth season.

Nurse Jackie: This series premiered on 8 June, 2009, in the USA, and was produced by Caryn Mandabach Productions, Madison Grain Elevator, De Long Lumber, Jackson Group Entertainment, Lionsgate Television and Showtime Entertainment Television. It has been exported to Australia, United Kingdom, Belgium, Holland, Hungary and Spain, where the cable channel *Calle 13* presents it since 8 April, 2010. It is a dark, sardonic and irreverent drama comedy, whose female protagonists can be described as anti-heroines due to their heinous and negative behaviours. The female protagonist is a drug addict who forges medical tests, while her boss is an evil heartless manager, and her best friend is an insensitive doctor, who only cares about buying and wearing designer clothes.

Mercy: This NBC's medical series centres on nurses and premiered on 23 September, 2009, in the USA. Its female protagonist worked as health worker and soldier in the war of Iraq, which is reminiscent of the first medical series that achieved worldwide success (like *MASH*, which was set in the Korean War and created as a protest to the Vietnam War). *Mercy* strongly criticises the USA health system and repeats the success of other series about nurses. *Mercy* has been exported to Australia, Holland, Belgium, Hungary and Spain, where it has been presented by Fox, since 25 November, 2010, and by the *Siete* channel, since 10 March, 2010. The series is set in New Jersey and the executive producers have used real scenarios of this state to shoot the drama, like

Jersey City, Newark, Cranford, Passaic, Secaucus and West Orange. The location of the series is interesting because it gives it an exotic character: it moves away from the big cities, which are known by the international audience, to a small population centre, which makes the story more intimate and its protagonists more human.

Trauma: this series repeated *Saved*'s premise of focusing on paramedics as protagonists. In this case, the protagonists drive ambulances and helicopters as they deal with any medical emergency on land or water. This series contains the largest number of examples of crisis communication. It premiered in the USA on 28 September, 2009, but was cancelled after the first season on 26 April, 2010. However, it was premiered in Spain on 22 May, 2010, by the cable channel AXN. The story was set and shot in San Francisco.

Three Rivers: This series is the newest within the sample. It premiered in the USA on 4 October, 2009 but was cancelled on 3 January, 2010, after only 12 episodes. The action is set and shot in Brownsville, Pennsylvania, which is the location of the hospital after which the series is named. *Three Rivers* is specialised in organ donation and attends patients in need of a transplant to survive. Each episode focuses on the recipients, their respective donors and their families. Meanwhile, the doctors in *Three Rivers* coordinated the entire process and have made the hospital the country's most prestigious centre in donation and transplantation. The series is produced and aired by CBS, which created the series to compete with ABC's *Grey's Anatomy*. *Three Rivers* features an Australian actor, Alex O'Loughlin, who was already known to the public thanks to his interventions in *Criminal minds*, *The Shield*, and above all, *Moonlight*, where he plays a private detective who is also a vampire.

This list is the result of a continuous four-year long search in the largest online film and television database, www.imdb.com, between 2006 and 2010. In order to find all the medical series on this website, a search for keywords and tags was conducted. For those who want to use this valuable online tool website in future research, it is advisable to use it in its original language, English.

Regarding the methodology, we simply accessed the website's *Plot Keywords* section and introduced the appropriate words for our research: *medicine*, *medic*, *doctor*, *medical doctor*, *nurse*, *medical clinic*, *medical profession*, *medical care*, *medication*, *health problem*, *pain*, *affection*, *human anatomy*, and *patient*. These words produced hundreds of thousands of results. To refine the search, we simply used the *Refine by Title Type* tool and clicked on *Television*. The search was refined by eliminating the television genres that were not fictional medical series, like *News*, *Talk Shows*, *Reality TV* and *Animation*.

This search was used to establish the list of all the medical series ever produced and premiered worldwide, and the 19 USA medical television series that had been premiered in Spain. It is difficult and irrelevant to share the global results here. However, it is important to highlight that medical series had been produced by many countries, including: Argentina, Australia, Austria, Belgium, Canada, Cuba, Denmark, Finland, France, Germany, Holland, India, Ireland, Israel, Italy, Japan, Mexico, New Zealand, Norway, Poland, Portugal, Singapore, Spain, Sweden, Switzerland, United Kingdom, and the USA. These findings are a good example of the usefulness of the keyword search at imdb.com and highlight the universal popularity of medical television series. Moreover, this type of search gives rigour and validity to the study because it provided an international and up-to-date sample. The data are representative of a television format of international success, although limited to the USA series premiered in Spain.

3. Procedure

The small screen is the main protagonist of this study. It is present in millions of homes around the world and has witnessed and narrated human history. Dozens of authors have given very different names and functions to television. Martín-Barbero and Rey (1999: 26) offer a definition that rightfully describes television as a historian and an archivist of our history:

“The audiovisual media (Hollywood cinema, television and most video content) simultaneously constitute the discourse par excellence of the bricolage of times –which is effortlessly transmitted to us, by removing the historical complexities and ambiguities of past events- and the discourse that best expresses the understanding of the present, the transformation of the long history in the intensiveness of a snapshot” (free translation from Spanish).

In fact, this study focuses on the role of television as historical archive. Past, present and future times have been and are shown on the small screen. To be precise, this study tries to cover twenty years of television history, which is, at the same time, the history of civilization and its conception of medicine and life. Medical series talk about people, because they are for the people. Their evolution also chronicles human evolution in the period under study. There is no denying that, since its inception, television has become one of the most influential phenomena for our civilisation (Eco, 2003: 307).

The methodology requires us to move from the study of television to the study of its formats and then to the analysis of the medical series, which are understood as a new

format that works in a transversal manner, and takes features of all other formats: medical series can be sitcoms, dramas, or soap operas. The distinctive feature of the medical series is that they always have doctors, nurses, health workers and patients; and they are all the protagonists of this study. After establishing the time frame, from 1990 to 2010, we examined the catalogue established through imdb.com. The series were individually analysed to establish the location of their production, their broadcasters, the countries that imported them, their evolution, duration, and success or failure.

The analysis included the examination of the personalities and actions of the 89 characters provided in total by the 19 series. This broad examination validates the results as original, genuine and representative of the genre within the past 20 years. The quantitative and qualitative analyses, through psychological theories, revealed that the health workers exercise their work objectively and evaluate the possibilities to face the world in ethical manners. They are responsible, efficient, analytical, rational and excellent professionals. Before being empathetic, loving, kind, ironic or amusing, they are good professionals. They convince viewers with their performance at work. Moreover, they are protective and paternalistic. They help and protect their patients and colleagues. They are reliable because they care about others. Viewers prefer doctors who are kind, attentive and supportive. Health workers are also impulsive, irrational and passionate, which departs from the typical formal, serious and cautious image of the profession, which makes them more human to the public.

Based on the previous, the habits of health workers are important. The public can identify with them and imitate their habits, which include all those concerning nutrition. From here, the methodology is based on the analysis of their dialogues, actions and decisions. As Lozano and Vicente (2010: 256) have indicated, “the need or curiosity to ‘know something’ starts with ‘knowing what to do’ with that something”. It is not enough to know the series and their medical protagonists. The important thing is to clarify the way they can influence the public through their success.

4. Results

4.1. Results on health workers’ nutrition

In all series, health workers are shown eating and drinking at some point. Eating is shown as another natural need, at least in few scenes in each season. The following table includes all the times in which the protagonist health workers eat, drink, and/or talk about what they consume:

Table 1: Number of scenes showing health workers eating and/or drinking

SERIES	SCENES WITH FOOD/DRINKS
<i>Northern Exposure</i>	5
<i>Dr. Quinn</i>	4
<i>Chicago Hope</i>	4
<i>ER</i>	5
<i>Becker</i>	7
<i>Strong Medicine</i>	2
<i>Doc</i>	4
<i>Scrubs</i>	12
<i>Nip/Tuck</i>	10
<i>House M.D.</i>	8
<i>Grey's Anatomy</i>	15
<i>Saved</i>	6
<i>3.lbs</i>	2
<i>Private Practice</i>	8
<i>Mental</i>	5
<i>Nurse Jackie</i>	15
<i>Mercy</i>	6
<i>Trauma</i>	9
<i>Three Rivers</i>	2

Source: Author's creation

It is necessary to highlight those series with the largest number of scenes related to food consumption. In *Northern Exposure* the protagonist misses the New York life style, which includes eating fast food and street breakfasts, made of bagels and cappuccinos. The doctors from ER complain, many times, that they spend most of the day working and cannot take care of their diets. Moreover, since the first episode, Dr. Ross confesses that he gets drunk when he is worried.

The young doctors in *Scrubs* also complain about their work schedules and are shown eating, dining or snacking in the hospital's cafeteria in almost all episodes. The plastic surgeons from *Nip Tuck* maintain a healthy diet, have a fridge full of organic products and consume tea and shakes prepared with fresh ingredients. Like in *Scrubs*, the cafeteria (private, in this case) is the place to meet and chat.

The young apprentices of *Grey Anatomy* also maintain a healthy diet: they only eat salads, apples and chicken sandwiches. However, Dr. Montgomery moves to California to work in her *Private Practice* and change her habits, including of course, her eating habits. In *Private Practice* sweets, brownies and cakes are eaten by doctors whenever they have love or sexual problems. In fact, the clinic's young receptionist tries to win the heart of his boss, Naomi Bennett, through home-made sweets.

4.2. Results on patients’ nutrition

Next to the health workers are the patients, who are the temporary protagonists of the medical series. Peña (2009: 1) points out that these characters are the key to the success of some of the current television series because “each episode focuses on one team member because either something happens to him or her, or the criminal act happens to a friend, an acquaintance or a relative”. On some occasions, people’s eating habits are the reason they end up in the hospital. In other cases, patients undergo a surgical procedure that forced them to maintain a healthy diet. And in other occasions, doctors recommend them to follow a new diet to avoid a new visit to the hospital.

The following table presents the number of scenes showing patients eating and/or drinking:

Table 2: Number of scenes showing patients eating or drinking

SERIES	SCENES WITH FOOD/DRINKS
<i>Northern Exposure</i>	4
<i>Dr. Quinn</i>	7
<i>Chicago Hope</i>	1
<i>ER</i>	4
<i>Becker</i>	2
<i>Strong Medicine</i>	7
<i>Doc</i>	2
<i>Scrubs</i>	2
<i>Nip/Tuck</i>	3
<i>House M. D.</i>	2
<i>Grey’s Anatomy</i>	1
<i>Saved</i>	3
<i>3.lbs</i>	3
<i>Private Practice</i>	4
<i>Mental</i>	8
<i>Nurse Jackie</i>	7
<i>Mercy</i>	2
<i>Trauma</i>	3
<i>Three Rivers</i>	4

Source: Author’s creation

The number of scenes related to patients’ nutrition is lower than the number of scenes related to health workers’ nutrition. The reason is simple: viewers trust doctors more than they trust patients and thus it is doctors who have to exhibit good eating habits and to do so more repeatedly. In contrast, the scenes focused on patients tend to be dedicated to what should not be consumed.

For example, in *Northern Exposure* the protagonist advises Ed not to eat too much fried chicken. In *Dr. Quinn*, Michaela advises the residents of Colorado Springs to not drink stagnant water. A patient in ER confesses he has beans for breakfast every day and Dr. Benton tells him that this is dangerous to his health. Meanwhile, Dr. *Becker* prohibits fatty food to his patients, even though he loves having fried eggs with bacon for breakfast. This recipe is also followed by the best friends of Doc Cassidy. Taking about food high in cholesterol and fat, patients in *Scrubs* eat hamburgers and pizzas, just like the daughters of *Nurse Jackie* and the patients from *Three Rivers*, who expect a transplant in order to be able to eat again what they like and what the doctors have forbidden.

If we put together the scenes about the nutrition of patients and doctors and distribute the results by food type, we can establish what types of food appear the most in the series:

Table 3: Types of food and drinks and number of times they appear

TYPES OF FOOD	TIMES THEY APPEAR
Coffee	7
Tea	1
Milk	4
Juices	6
Soft drinks	5
Alcohol	18
Soup	6
Bread, biscuits and cereals	2
Pasta	1
Sandwiches	3
Fruit	2
Vegetables, salads and legumes	5
Grilled fish or meat	6
Sushi	1
Caviar	1
Candies and chocolates	6
Popcorn and canapés	4
Cake, muffins, brownies, donuts	7
Fast food (e.g. pizza, hamburgers, hotdogs)	19

Source: Author's creation

Table 3 shows an inverted and unhealthy food pyramid. Alcohol and fast food are the food types that appear the most. This confirms the hypothesis that medical series educate on nutrition to the viewers because the health workers criticise negative eating habits.

Fictional health workers do not only recommend moderate consumption to patients, but also apply the same standard to their own lives.

Table 4: Food-related health crisis in the sample of medical series

SERIES	FOOD-RELATED HEALTH PROBLEMS
<i>Northern Exposure</i>	-
<i>Dr. Quinn</i>	<ul style="list-style-type: none"> - Water contaminated with mercury. - Food contaminated in restaurant.
<i>Chicago Hope</i>	<ul style="list-style-type: none"> - A doctor bites another and notices his skin is salty, which leads to the diagnosis of a disease. - Doctors find a mutilated finger in a patient's stomach.
<i>ER</i>	<ul style="list-style-type: none"> - A hotel is serving poisoned food which affects all the guests of a wedding banquet and all the members of a Japanese tourist group.
<i>Becker</i>	-
<i>Strong Medicine</i>	<ul style="list-style-type: none"> - A cancer-suffering woman is on hunger strike and the leading doctors want her to eat because she is very ill.
<i>Doc</i>	-
<i>Scrubs</i>	-
<i>Nip/Tuck</i>	-
<i>House M.D.</i>	-
<i>Grey's Anatomy</i>	<ul style="list-style-type: none"> - A teenager travels to Mexico to undergo an illegal and insalubrious stomach reduction, and keeps this information from his parents. An infection destroys his stomach and leaves him unable to eat normally.
<i>Saved</i>	-
<i>3.lbs</i>	-
<i>Private Practice</i>	<ul style="list-style-type: none"> - The skin of several girls becomes blue after they play and eat in a hut, where a dangerous fertiliser is stored. - A girl is accused of suffering anorexia and vomiting food but is later diagnosed with the <u>Crohn's disease</u>, which does not allow her to synthesise food well or gain weight.
<i>Mental</i>	-
<i>Nurse Jackie</i>	-
<i>Mercy</i>	-
<i>Trauma</i>	-
<i>Three Rivers</i>	-

Source: Author's creation

For example, in *Northern exposure* the protagonist is also a big fan of Chinese takeaway food. However, he recognises that this is not very healthy. Doctors in *ER* also consume Chinese food, but acknowledge they should eat more salads. The protagonists of *Scrubs*

eat pizzas and burgers in their leisure time, but they only eat salads and sandwiches at the hospital. Similarly, Izzy Stevens, from *Grey's Anatomy*, recognises that she should eat less muffins and cakes when she feels depressed. Dr. Montgomery, from *Private Practice*, admits she has gained some weight in Los Angeles after eating too many sweets. And in *Mental*, the protagonist and psychiatry chief knows that the only way he can win the trust of a suicidal patient is by offering him a delicious pastrami and barbecue sauce sandwich.

4.3. Results on food-related health crises

The previous findings can be related to the most important part of the research, from the communicative point of view. In the sample of series, 387 cases of crisis were identified. Among these cases, there were only few crises related to consumption.

Of the 387 cases of crisis accidents, scandals and problems between ethics, morals and politics that were identified, the number of food-related crises is very low: only nine cases. However, this does not contradict the hypothesis that medical series educate the public in nutrition and healthy eating because the large number of scenes showing health workers and patients with food and drinks demonstrated otherwise. In fact, the crises always focus on accidents that the health worker or the patient cannot control; they are unexpected accidents that affect their health. In contrast, the 387 crises do contain plenty of medical negligence whose analysis is not relevant to the topic.

5. Conclusions

The large number of scenes showing health workers eating and/or drinking indicates that medical series can be an important channel for education on nutrition and healthy eating. Viewers have trusted television's health workers since the 1950s. The large number of medical series that has been produced since then, across the world, endorses that trust, which is renewed with the success achieved by each new series.

The current success of the medical series is not a new phenomenon: it has been cyclical and repetitive since television emerged. *House* has existed before with other names, actors and hospitals. It is the current paradigm of the medical series. But *House* is not the only one and after its end, which has been already announced, it will soon have successors that will imitate it in terms of characters, methodology, plots, dialogues and stereotypes. At the same time, since *House* is a character loved by the viewers, of all ages and generations, he can become the best model to copy and the didactic speaker with the greatest impact. Particularly for doctors who are obliged, by their profession, to protect the health of their fictional patients and their real and attentive viewers.

The audience's trust in the health workers remains even when the health professionals practice their work with discouragement or failures. The production notes of each series have indicated that there is no perfect health professional. Certainly, there are excellent doctors who solve all cases. However, they have dysfunctional intimate lives because they have, many times, put their time and efforts into ascending in the medical profession and not into forming a family.

This is the result of the burn out syndrome, a term coined in 1976 by Christina Maslach at a convention of the American Psychological Association. It consists of a prolonged and internal stress caused by the routine and daily drama at work. It affects work motivation, relationships with family, friends, co-workers and patients, and the good social order of the health organisation or institution.

This stress is continuous and externalised, which affects doctors' professional performance and disturbs doctors' eating habits. The cases of *Northern Exposure* and *Private Practice* are two good examples of this problem. Doctors feel out of place. They are not motivated by their work, do not eat well, and eat in enormous and unnecessary quantities. In other words, their vital behaviours and the way in which they meet their physiological need for food are the cause and effect of their satisfaction and situation at work. The aforementioned examples corroborate this.

These ideas ratify that health workers seem credible to the public because they are portrayed as imperfect humans. They are heroes and antiheroes at the same time, human and empathetic characters to the whole audience. They have weaknesses, errors, suffering, dissatisfactions, joys and personal experiences that affect their work. For that reason and those small universal human flaws, these television series are exportable to all countries. They can be understood and gain followers in any country. Data on the export of the aforementioned series confirm this conclusion and help understanding their international success.

The medical series are certainly entertainment products. However, this research has shown that they go beyond offering pleasure, entertainment and distraction. Fictional health workers and patients eat and drink, rightly and wrongly, so that the public can learn to eat properly. Therefore, they are a teaching public service and get the attention of the audience at several levels. In addition, the series have the continuity and longevity that film texts lack. Health writers, producers and educators should take advantage of this temporal persistence and incessant success to continue educating. Recreation merges with the psychological, cognitive and behavioural processes. Therefore, medical doctors are an ideal channel to educate in nutrition and healthy eating.

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