"Spyt kom te laat"

The development and evaluation of a health-related fotonovela about methamphetamine ("tik") use in the Western Cape and Northern Cape provinces of South Africa

by

Herbert Douglas Davis

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Promotors: Prof Carel Jansen
Prof Leon de Stadler

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Declaration

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Abstract

The aim of this research project was to establish if and why fotonovelas can be an effective messaging tool to communicate the dangers associated with using methamphetamine ("tik") to Coloured communities in the Western Cape and Northern Cape provinces of South Africa and persuade them to avoid this drug. A health-related fotonovela about *tik*, "Spyt kom te laat" (Regret comes too late), was developed for this purpose using an entertainment-education approach involving a six-step production process, incorporating inputs from the target audience and subject field experts. Fear appeal characteristics were added to help improve the fotonovela's effectiveness. Two related studies were performed to evaluate the impact of the fotonovela.

One study (N = 303) was a randomized controlled trial that compared the effects of three message conditions (a group who read the fotonovela, a group who read a traditional brochure, and a no message control group) in a between-groups experimental design. The results did not show knowledge gain in the fotonovela group to be significantly higher compared to the traditional brochure group. When compared to the control condition, both health documents did have a positive and significant effect, however, on knowledge level for those questions that did not show ceiling effects. The effects of the two health documents did not differ in terms of respondents' attitudes. Nonetheless, intention related to interpersonal discussions of *tik* health messages was found to be significantly higher for those respondents in the fotonovela condition compared to those respondents in the traditional brochure condition. The results did not show attitudes and intentions in the fotonovela and traditional brochure group to be significantly higher compared to the control group. The Extended Parallel Process Model (Witte, 1992, 1998), the Entertainment Overcoming Resistance Model (Moyer-Gusé, 2008), as well as theoretical assumptions about the arousal of emotions (*fear, surprise, anger*, *sadness* and *compassion*) from reading the fotonovela were applied to come up with explanations for differences in participants' attitudes and intentions. The fear appeal elements *threat* and *self-efficacy* showed promise for possibly affecting attitudes related to personal health behaviour, while the emotions *sadness* and *compassion* were significant and positive predictors of intentions and attitudes related to interpersonal discussions of *tik* health messages, respectively. In terms of message preference, about twice as many respondents said that they preferred reading health information about *tik* in fotonovela format over the traditional

brochure, with a clear preference for the fotonovela in the 19 years and younger and in the 35 years and older age groups.

The other study was explorative in nature. In this study, the fotonovela and traditional brochure were placed in the waiting room of a primary health care clinic to measure actual preference for either document as health communication tool. In performing this study – the first of this type ever – some instructive practical problems were experienced that could not all be solved. Nevertheless, there seem to be sufficient grounds to conclude that patients preferred to take home the fotonovela over the traditional health brochure. However, this preference will have to be put to the test again in follow-up studies. The appearance of the fotonovela was highlighted as the main motivating factor as to why patients decided to read the fotonovela, while patients who chose to read the traditional brochure did so mainly because they wanted to learn more about the health subject matter. Participants who read the fotonovela remembered aspects of the storyline best, whereas readers of the traditional brochure mainly recalled health information associated with *tik*.

Based on the preference for the fotonovela over the traditional brochure found in both studies, and on the comparable knowledge and behavioural intentions that were identified after people had actually read the information in one of these formats, it is recommended that document designers consider using fotonovelas as a health communication tool dealing with *tik* or similar subjects. In order to help enhance the persuasiveness of such a fotonovela, adding fear appeal characteristics to such a health document and incorporating elements to try to arouse the emotions *sadness* and *compassion* can also be considered. Furthermore, it appears that combining fotonovelas with elements from traditional brochures may increase the chances of the included health messages reaching audiences. Therefore, further research is warranted into the efficacy of, and preferences for fotonovelas that incorporate features of traditional health brochures – or the other way around.

Abstrak

Hierdie navorsingsprojek was daarop gemik om vas te stel of en waarom fotonovelles as 'n doeltreffende boodskap-medium gebruik kan word om aan bruin gemeenskappe in die Wes-Kaap- en Noord-Kaapprovinsies van Suid-Afrika die gevare rondom metamfetamien ("tik") se gebruik te kommunikeer en hulle te oorreed om dié dwelm te vermy. Deur 'n vermaaklikheid-opvoedkundige benadering te gebruik wat 'n sesstap-produksieproses behels het, én met insette van die teikengehoor en onderwerpsveld-kenners, is "Spyt kom te laat" *(Regret comes too late)*, 'n gesondheidverwante fotonovelle oor *tik*, vir dié doel ontwikkel. Eienskappe van vreestrefkrag is bygewerk om die fotonovelle se doeltreffendheid te verbeter. Om die trefkrag van die fotonovelle te beoordeel, is twee verwante studies uitgevoer.

Een studie (N = 303) was 'n ewekansige, beheerde proefneming wat die invloed van drie boodskap-toestande ('n groep wat die fotonovelle gelees het, een wat 'n tradisionele brosjure gelees het en 'n boodskaplose kontrolegroep) in 'n tussengroep- eksperimentele ontwerp vergelyk het. Resultate het nie getoon dat kennistoename in die fotonovellegroep beduidend hoër in vergelyking met die tradisionele brosjuregroep was nie. Wanneer enige een van die twee gesondheidsdokumente egter met die kontroletoestand vergelyk is, het albei dokumente 'n positiewe en beduidende effek op kennisvlak vir dié vrae gehad wat geen plafoneffek getoon het nie. Vergelykings in terme van respondente se houdings het nie afdoende bewys gelewer dat die fotonovelle, of tradisionele brosjure, beter as die ander een was nie. Intensies met betrekking tot interpersoonlike besprekings oor *tik*-verwante gesondheidsboodskappe was egter beduidend hoër vir deelnemers in die fotonovellegroep in vergelyking met deelnemers in die tradisionele brosjuregroep. Houdings en intensies was nie beduidend hoër wanneer enige een van die twee gesondheidsdokumente met die kontrolegroep vergelyk is nie. Die *Extended Parallel Process Model* (Witte, 1992, 1998) en *Entertainment Overcoming Resistance Model* (Moyer-Gusé, 2008) asook teoretiese aannames oor die opwek van emosies (vrees, verbasing, woede, hartseer en deernis) weens die lees van die fotonovelle is aangewend om verduidelikings vir die deelnemers se uiteenlopende houdings en intensies te vind. Die vreestrefkrag-elemente *bedreiging* en *selfgelding* beloof om dalk 'n invloed te hê op houdings wat verband hou met persoonlike gesondheidsgedrag, terwyl die emosies *hartseer* en *deernis* onderskeidelik beduidende en positiewe voorspellers was vir intensies en

houdings wat verband hou met interpersoonlike besprekings oor *tik*-verwante gesondheidsboodskappe. Rakende boodskap-voorkeur het bykans twee keer soveel respondente gesê dat hulle gesondheidsinligting oor *tik* in fotonovelleformaat, eerder as in die tradisionele brosjure, verkies het, met 'n duidelike voorkeur vir die fotonovelle by die 19 jaar en jonger- en by die 35 jaar en ouer-ouderdomsgroepe.

Die ander studie was ondersoekend van aard. In hierdie studie is die fotonovelle en tradisionele brosjure in 'n primêre gesondheidsorgkliniek se wagkamer geplaas om werklike voorkeur vir elke dokument as kommunikasie-instrument te meet. Met die uitvoer van hierdie studie – die eerste nog in sy soort – is enkele leersame praktiese probleme ondervind wat nie almal opgelos kon word nie. Nietemin wil dit blyk asof daar genoegsame redes bestaan om af te lei dat pasiënte verkies het om eerder die fotonovelle as die tradisionele brosjure saam met hulle huis toe te neem. Dié voorkeur sal egter in opvolgstudies weer op die proef gestel moet word. Die fotonovelle se voorkoms het uitgestaan as vernaamste motiveringsfaktor waarom pasiënte dít wou lees, terwyl dié wat die tradisionele brosjure verkies het veral meer wou uitvind oor die gesondheidsorg-materiaal. Deelnemers wat die fotonovelle gelees het, het aspekte van die storielyn die beste onthou, terwyl lesers van die tradisionele brosjure hoofsaaklik inligting oor *tik* kon onthou.

Gebaseer op die voorkeur vir die fotonovelle bo die tradisionele brosjure, wat in albei studies gevind is, en gebaseer op die vergelykbare kennis en gedragsintensies wat gevind is nadat mense werklik die inligting in een van dié formate gelees het, word aanbeveel dat dokumentontwerpers die gebruik van fotonovelles oorweeg as instrument vir gesondheidsorg-kommunikasie oor *tik* of soortgelyke onderwerpe. Om die oorredingskrag van so 'n fotonovelle te help versterk, kan ook oorweeg word om vreestrefkrag-eienskappe by te voeg, en ook elemente in te werk wat *hartseer* en *deernis* as emosies probeer opwek. Voorts blyk dit dat die kombinasie van fotonovelles met elemente van tradisionele brosjures die kanse sal verbeter dat die ingeslote gesondheidsboodskappe gehore sal bereik. Derhalwe is nog navorsing geregverdig oor die doeltreffendheid van en voorkeur vir fotonovelles wat kenmerke van tradisionele gesondheidsbrosjures inkorporeer – of andersom.

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List of Abbreviations

Aids	Acquired immunodeficiency syndrome
ANOVA	Analysis of variance
CI	Confidence interval
E-E	Entertainment-Education
E-ELM	Extended-Elaboration Likelihood Model
EORM	Entertainment Overcoming Resistance Model
EPPM	Extended Parallel Process Model
HIV	Human immunodeficiency virus
HPV	Human Papillomavirus
IMBP	Integrative Model of Behavioural Prediction
KABB	Knowledge, attitudes, beliefs and behaviours
LEP	Limited English proficiency
MANOVA	Multivariate analysis of variance
PHM	Persuasive Health Message
PSI	Para-social interaction
RBD	Risk Behavior Diagnosis
SA	South Africa
SABC	South African Broadcasting Corporation
SANCA	South African National Council on Alcoholism and Drug Dependence
SAPS	South African Police Services
SCT	Social Cognitive Theory
STI's	Sexually transmitted infections
TB	Tuberculosis
TIM	Transportation-Imagery Model
Q&A	Questions and Answers
USA	United States of America

CHAPTER 1. INTRODUCTION

1.1 Preamble

The focus of this dissertation is on an important theme in Document Analysis and Design, namely, the design and evaluation of persuasive health documents. Research into factors which contribute to effective health communication and the effective design of persuasive health documentation in South Africa (SA) and elsewhere is of critical importance, not only for setting a platform for positive behaviour change, but also because of the complexity that often goes with the behaviour and underlying attitudes that such communication is trying to change (Hoeken & Swanepoel, 2008; Perloff, 2007). This study attends to strategies of persuasion as they occur in documentation circulated in health care contexts. It focusses on the development and subsequent evaluation of a health-related photo storybook or "fotonovela" about methamphetamine or "tik" use in a South African context.[1] The study sets out to determine whether, and if so, why, a fotonovela can be an effective messaging tool to (a) communicate the dangers of risky health behaviour and (b) persuade readers to avoid such behaviour.

1.2 The problem of *tik*

The abolition of apartheid in 1994 in SA ended decades of isolation and exposed the country's infrastructure to transnational drug trafficking. This exposure, in turn, led to an increase in local drug use (United Nations Office on Drugs and Crime, 2012, pp. 92-93). It was during this period, as well as in the early part of the 21st century, that the stimulant drug methamphetamine rose to prominence in SA. Amphetamine-type stimulants are the second most widely used drug in the world after cannabis/marijuana (United Nations Office on Drugs and Crime, 2014, p. 49).

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[1] The Spanish word "fotonovela" is preferred in this dissertation, as opposed to using, for example, the terms "photonovel", "photonovella" or "photo storybook". "Fotonovela" is used in most other comparable studies (see e.g. Cabassa, Contreras, Aragón, Molina, & Baron, 2011; Cabassa, Molina, & Baron, 2012; Hernandez & Organista, 2013; Koops van 't Jagt et al., 2017; Unger, Molina, & Baron, 2009; Unger, Cabassa, Molina, Contreras, & Baron, 2013).

In SA, methamphetamine is commonly known under the slang name *tik*, due to the sound it makes when smoked in custom-made glass pipes or *tik-lollies* (Peltzer, Ramlagan, Johnson, & Phaswana-Mafuya, 2010). *Tik* is responsible for the fastest addiction rate ever seen in this country – specifically in the Western Cape province of SA. Although official statistics do not track the number of users, *tik* abuse is considered a bigger problem than alcohol abuse in this province (Dada et al., 2015). Measured in terms of the number of admissions for a specific drug at treatment centres in and around Cape Town, the researchers Pluddemann, Myers, and Parry (2008) state that the proportion of patients reporting *tik* as their primary substance of abuse increased from 0.3% to 42.3% in the period 2002 – 2006. This represents the fastest increase in admissions for a specific drug ever recorded in SA. Statistics from the second half of 2014 (i.e. July – December 2014) reveal that 46% of all patients reporting for treatment at drug centres in the Western Cape list *tik* as either their primary or secondary substance of abuse – by far the highest of any province (Dada et al., 2015).

Tik is most commonly used by 'Coloured' people in the Western Cape (an ethnic label for people of mixed ethnic origin), specifically young males (Wechsberg et al., 2008). At the end of 2014, 70% of patients admitted to specialist drug treatment centres for *tik* in the Western Cape were Coloured and 69% were males, with the mean age of patients being 29 years. Of these *tik* patients, 64% reported using this drug on a daily basis (Dada et al., 2015). Many Coloured people in the Western Cape are from previously disadvantaged areas (a remnant of apartheid), where drug use in general is a big problem, e.g. Delft in the Cape Town area (Watt et al., 2014).

The statistics presented point to *tik* undoubtedly being a major health threat in the Western Cape. Therefore, persuasive health communication to combat this threat effectively is of the utmost importance. Different entities have attempted to persuade people to take action against the ills of *tik* and other drugs in the Western Cape over the last few years. For example, The City of Cape Town has spearheaded different anti-drug campaigns in its municipal area.[2] These include the 'Be Smart, Don't Start' campaign in 2012 and the 'I have a drug problem' campaign in 2013.[3] The 'Be

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2 The City of Cape Town is the metropolitan municipality which governs the six municipalities of the city of Cape Town, namely Cape Town/Central, Tygerberg, South Peninsula, Blaauwberg, Oostenberg and Helderberg (Celliers, Colenbrander, Breetzke, & Oelofse, 2015).

3 Statistical data pertaining to the effects of these campaigns was not available.

Smart, Don't Start' campaign was aimed at spreading prevention messages among young people who are either using drugs or were tempted to do so by their peers. The 'I have a drug problem' campaign specifically targeted all those affected by substance abuse, which included the family and friends of substance abusers. The City of Cape Town also hosts youth camps and organizes substance awareness programmes at schools across the province (City of Cape Town, 2014).

Looking specifically at health-related documentation about *tik* (i.e. the focus of the present study) currently available at e.g. provincial clinics and health sites in the Western Cape, this documentation seems to be mainly limited to traditional brochures primarily containing facts and figures about the dangers of *tik* (M. McCrea from the Department of Health, Western Cape Government, personal communication, May 28, 2015). To what extent these traditional brochures are effective, is an open question. The fact of the matter is that the *tik* crisis is showing no signs of dissipating. Therefore, any sound advice about persuasive health communication strategies that can be utilized to design effective and persuasive health promotion documents or improve current ones would be welcome.

1.3 Entertainment-education narratives in health-based persuasion

A strategy that has proven to be successful in delivering persuasive health messages, specifically to disadvantaged or underprivileged people, is entertainment-education or E-E (Unger, Cabassa, Molina, Contreras, & Baron, 2013; Unger, Molina, & Baron, 2009; Singhal & Rogers, 1999). E-E involves incorporating health and other messages into popular entertainment media, including television, radio and the print media, with the aim of positively influencing awareness, attitudes, knowledge, behavioural intentions and ultimately behaviour (Moyer-Gusé, 2008; Singhal, Cody, Rogers, & Sabido, 2004; Unger et al., 2013).

For E-E contents as well as for personal stories, exemplars, and testimonials, *narrative* is used as an umbrella term (Shen, Sheer, & Li, 2015; Singhal et al., 2004). Hinyard and Kreuter (2007, p.778) define a narrative as any cohesive and coherent story with an identifiable beginning, middle, and end that provides information about scene, characters and conflict; raises unanswered questions or unresolved conflict; and provides resolution. Put simply, a narrative includes "at least one character, who experiences at least one event" (De Graaf, Sanders, & Hoeken, 2016, p.90). A

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number of recent meta-analysis studies have – to a greater or lesser extent – found narrative texts to be more successful than non-narrative texts, or no message control groups, in terms of influencing message outcomes (see e.g. Braddock & Dillard, 2016; De Graaf et al., 2016; Shen & Han, 2014; Shen et al., 2015; and Zebregs, Van den Putte, Neijens, & De Graaf, 2015). E-E narratives have been successful in communicating health information for a variety of health topics across different countries (Moyer-Gusé, 2008; Singhal et al., 2004; Singhal & Rogers, 1999). In SA, E-E narratives have also been effectively used to convey health information. For example, *Soul City* (a multimedia programme that disseminates health messages about HIV prevention, condoms, domestic violence and rape) was found to have a positive influence on viewers' awareness, knowledge and attitudes (Moyer-Gusé, 2008; Soul City Institute, 2017).

1.4 Fotonovelas: A type of print media format of E-E narratives

Based on the evidence presented, narratives, and more specifically E-E narratives, may prove effective as persuasive health promotion documents about *tik*. A type of print media format of E-E narratives that has shown potential to be a persuasive health education tool is the fotonovela or photo storybook (Duizer, Koops van't Jagt, & Jansen, 2014; Koops van't Jagt, De Winter, Reijneveld, Hoeks, & Jansen, 2016; Lee, Yoon, Chen, & Juon, 2013; Unger et al., 2013). Fotonovelas are small booklets that portray a dramatic story using posed photographs and text bubbles/captions with simple text usually set in everyday life (Boyte, Pilisuk, Matiella, & Macario, 2014; Unger et al., 2013).

Particularly popular in Latin-America to promote health messages, fotonovelas are also increasingly being used for this purpose in North America and parts of Europe (Jansen, 2017). Currently, there is a growing interest among allied fields such as medical education and public health to pursue the possibility of combining narratives and visualization to communicate health messages (King, 2017). The effects of fotonovelas as health communication tool, however, remain under-explored (Lee et al., 2013, p. 695). Still, findings from experimental studies where the effects of health-related fotonovelas about e.g. Hepatitis B, diabetes, cervical cancer and dementia were investigated show promising results for the effect of fotonovelas on readers' behavioural intentions (see e.g. Boyte et al., 2014; Cabassa, Molina, & Baron, 2012; Cabrera, Morisky, & Chin, 2002; Koops van't Jagt et al., 2016; and Unger et al., 2009, which are discussed in more detail in

Chapter 2). Fotonovelas have also been successfully used for health promotion purposes in SA. For instance, in a study conducted in the KwaZulu-Natal province of SA by James et al. (2005), a fotonovela about sexually transmitted infections (STI's) was presented to secondary school learners. James et al. measured the effect of this fotonovela by comparing it to a control group who had not read the fotonovela as well as by comparing pre-test results with post-test results. The authors report a significant increase in knowledge about how STI's are spread and a more positive attitude towards condom use, immediately after reading the novel as well as six weeks later.

Fotonovelas have been found to be especially effective in communicating health messages to low-literate audiences (Cabassa et al., 2012; Duizer et al., 2014; Koops van't Jagt et al., 2017; Lee et al., 2013; Unger et al., 2013; Valle, Yamada, & Matiella, 2006).[4] Although low-literate numbers in SA are not reported as such, *Census 2011* data for SA (Statistics South Africa, 2014) show that 67.4% of Coloured people older than 20 did not complete Grade 12, with 25.4% of this number not having any secondary school qualification whatsoever. It therefore follows that many Coloured people could be classified as low-literates. Dick, Van der Walt, Hoogendoorn, and Tobias (1996) report promising findings for the possible use of fotonovelas among Coloured people in Cape Town in an earlier study. In this study, a fotonovela about Tuberculosis (TB) was developed based on feedback from focus group discussions with the target audience about this disease. Although the actual effectiveness of the fotonovela developed in the study was not empirically tested, results from an informal evaluation of this fotonovela were promising. Participants perceived the fotonovela to be an effective tool to convey messages about TB.

In summary, E-E narratives may be effective as health documentation tool about *tik.* More specifically, fotonovelas as printed document versions of E-E narratives show promise to successfully disseminate such health messages as this media format has been (a) found to be effective in addressing an array of health issues, (b) proven to work in a South African context, (c) successful among low-literates – a category in which many Coloured people fall, and (d) perceived as an effective health communication tool by Coloured people in an explorative study.

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[4] Low-literates are not fully able to use printed and written information to adequately function in society, to achieve their goals, and to develop their knowledge and potential (White & Dillow, 2005, p.4).

1.5 Research questions and hypotheses

1.5.1 Comparing the effects of health-related fotonovelas with more traditional health information brochures (research question 1)

To determine whether fotonovelas can be successful in disseminating health messages about *tik* among Coloured people in the Western Cape, it may be important to compare its effectiveness against more traditional non-narrative health documents about the same subject matter. As Murphy, Frank, Chatterjee, and Baezconde-Garbanati (2013) comment with regards to the lack of narrative health messages being employed by the medical establishment in the United States (USA), "change at the national level is unlikely without the functional equivalent of randomized clinical trials that contrast the relative effectiveness of health information conveyed using a non-narrative format against the same information conveyed in a fictional narrative that demonstrates that the narrative is superior" (p.118).

A review of the fotonovela literature (see Chapter 2) identified only four studies that compared the effects of fotonovelas to more traditional type formats: Duizer et al. (2014), Gallagher-Thompson et al. (2015), Koops van't Jagt et al. (2017), and Unger et al. (2013). In these studies, fotonovelas outperformed more traditional formats in certain areas. Studies by James et al. (2005), and Hernandez and Organista (2013) compared the effects of a fotonovela against a control group only (see Chapter 2 for an in-depth discussion of the findings of these studies). Other fotonovela studies by Boyte et al. (2014), Cabassa, Contreras, Aragón, Molina, and Baron (2011), Chan, Brown, Sepulveda, and Teran-Clayton (2015), Lee et al. (2013), Unger et al. (2009), and Valle et al. (2006) lacked experimental rigour to confidently conclude that fotonovelas are more effective than other health documents (see Chapter 2 for an in-depth discussion of these studies). This leads to research question 1 (**RQ1**):

RQ1: To what extent does reading a fotonovela about *tik* influence the a) the knowledge level, b) behavioural attitudes, and c) behavioural intentions of Coloured people in the Western Cape as compared to reading a more traditional brochure about this topic?

1.5.2 Explanations for the effects of health-related fotonovelas (hypotheses 1 – 11)

A shortcoming of many of the studies conducted on health-based fotonovelas is the general lack of explanations as to why fotonovelas were effective (or not) in conveying health messages (identified as part of the literature review for this study, see Chapter 2). Additionally, in cases where explanations were provided for the effects found, there was a lack of empirical evidence to back up the validity of the arguments presented (see Chapter 2). Based on these observations, possible explanations for differences in participants' behavioural attitudes and behavioural intentions are presented as part of the current study. Specifically, (a) engagement with the narrative, (b) fear-appeal-based explanations, and (c) the arousal of emotions (in addition to fear) are put forward to help clarify differences in participants' attitudes and intentions and will be operationalized as hypotheses 1 – 10 in Sections 1.5.2.1 – 1.5.2.3 below. Although not explaining differences in participants' attitudes and intentions as such, a final hypothesis relates to the associations between behavioural attitudes, behavioural intentions, and knowledge level, operationalized as hypothesis 11 in Section 1.5.2.4 below.

1.5.2.1 Engagement with the narrative as explanation for fotonovela outcomes (hypotheses 1 – 4)

A possible explanation for the persuasiveness of health-based narratives relates to the characteristics of the receivers and the extent to which they engage with the narrative themselves. This engagement aspect triggered by narratives may contribute to its success, possibly making narratives more effective than other persuasive messages like traditional brochures (Murphy, Frank, Moran, & Patnoe-Woodley, 2011; Slater & Rouner, 2002; Sood, 2002). Here, involvement in the story and involvement with the characters are especially topical. In a meta-analysis by Tukachinsky and Tokunaga (2013) which included 45 health-based studies, the researchers found a positive association between engagement with the narrative and its characters on the one hand and attitudes and intentions implied by the narrative on the other hand.

Engagement with the story/narrative and engagement with the characters are most often referred to in the narrative persuasion literature as transportation and identification, respectively. Transportation and identification are considered by most researchers in the field to be two

conceptually distinct engagement variables with empirical evidence showing that they can be independently manipulated (Hoeken & Sinkeldam, 2014; Moyer-Gusé, Chung, & Jain, 2011; Moyer-Gusé & Nabi, 2010; Murphy et al., 2013; Murphy et al., 2011; Tal-Or & Cohen, 2010). As Tal-Or and Cohen (2010) note, both engagement variables refer to the degree of involvement in the story, but while transportation relates to the story as a whole, identification relates to one or more character(s). In a meta-analysis by De Graaf et al. (2016), the authors report that of the 42 studies included in their study comparing health-related narratives to a non-narrative or no message control condition, about a quarter of these studies found an effect of the narrative on at least one of transportation and identification.

Transportation can be defined as the degree or level of involvement with the narrative or story, also described as being swept into the story or being lost/immersed/engaged/absorbed in the narrative (e.g. Moyer-Gusé, 2008; Slater & Rouner, 2002). Transportation is also sometimes referred to as narrative engagement (Busselle & Bilandzic, 2009; Hoeken & Fikkers, 2014) or narrative involvement (Moyer-Gusé, 2008). Busselle and Bilandzic (2009) attribute different dimensions to transportation, namely the extent to which (a) the audience's attention is focused on the story, (b) the audience perceives the world depicted in the story as more real than the real world, (c) the audience is affected by the story, and (d) the audience can follow the story (also see Hoeken & Sinkeldam, 2014; Murphy et al., 2013). Green and Brock (2000) define transportation as "a convergent process, where all mental systems and capacities become focused on events occurring in the narrative" (p. 701). According to these authors, the major dimensions of transportation include emotional involvement in the story, cognitive attention to the story, feelings of suspense, lack of awareness of surroundings, and mental imagery. Van Laer, De Ruyter, Visconti, and Wetzels (2014), focussing on transportation in their meta-analysis of 76 studies, found that transportation predicted beliefs, attitudes and intentions.

Cohen (2001) defines *identification* as "a process that consists of increasing loss of self-awareness and its temporary replacement with heightened emotional and cognitive connections with a character" (p. 251). Essentially then, identification relates to being involved with the characters in a narrative. As Murphy et al. (2011, p. 409) point out, however, identification is often defined differently by researchers through related but conceptually distinct constructs. Identification has,

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for example, been described as encapsulating experiences in which readers (a) adopt a character's perspective, (b) perceive themselves to be similar to a character, (c) see the story happening through a character's eyes, (d) like a character, (e) relate to a character, (f) imagine themselves as a character, (g) wish to be a character, (h) experience the feelings of a character, (i) embrace a character's goals, or (j) feel they know a character (Cohen, 2001; Hoeken & Fikkers, 2014; Moyer-Gusé, 2008; Moyer-Gusé & Nabi, 2010; Murphy et al., 2013; Murphy et al., 2011).

Despite most scholars being in agreement that transportation and identification are conceptually distinct constructs, De Graaf, Hoeken, Sanders, and Beentjes (2009, p.803) argue that it is "hard to draw a clear line between transportation and identification", while Murphy et al. (2011, p.411) note that the association between these constructs is "murky". A key distinction, however, involves perspective. That is, identification relates to a person taking the perspective of a particular character, while transportation does not require this kind of perspective taking, as audience members may become swept up in an imaginary world, but maintain their own perspective (Jansen, 2017; Moyer-Gusé & Nabi, 2010).

Transportation and identification are at the core of many influential theories and models in the narrative persuasion literature to explain how narrative persuasion works (Hoeken & Fikkers, 2014; Moyer-Gusé, 2008; Murphy et al., 2011; Sood, Menard, & Witte, 2004). These theories and models include Social Cognitive Theory or SCT (Bandura, 2002), the Model of Culture-Centric Narratives (Larkey & Hecht, 2010), the Extended-Elaboration Likelihood Model or E-ELM (Slater & Rouner, 2002), the Transportation-Imagery Model or TIM (Green & Brock, 2002), and the Entertainment Overcoming Resistance Model or EORM (Moyer-Gusé, 2008).

SCT suggests that identification with characters might motivate people to enact the modelled behaviour of the characters, but only if the consequences of this behaviour are perceived as positive and if the level of self-efficacy (i.e. the level of confidence of the receiver in his/her ability to enact the behaviour) is high enough (Bandura, 2002). Complementary to SCT is the Model of Culture-Centric Narratives, which proposes cultural factors (e.g. culturally realistic characters and storylines) promote audience engagement e.g. through transportation and identification which, in turn, increases intentions and ultimately influences behavioural outcomes (Larkey & Hecht, 2010).

For the most part, theories such as the E-ELM, the TIM and the EORM suggest that the success of narratives lies in the role that transportation and identification play to overcome some form of resistance to persuasion (Jansen, 2017). Moyer-Gusé (2008, p. 414) defines resistance to a message as the opposite of being persuaded. For example, being transported into a story may lead to a lack of resistance as people do not want to disrupt the enjoyable experience – even if they might know that they are being persuaded (Moyer-Gusé, 2008; Slater & Rouner, 2002). Transportation can also make people less resistant because it makes them less aware of the persuasive content of the message (Moyer-Gusé, 2008). The more people feel transported or engaged in the story, the less resources they have left to argue against any persuasiveness (Hoeken & Fikkers, 2014; Slater & Rouner, 2002). Identification with characters can lead to the receiver being more susceptible to the character's thoughts and beliefs. This character involvement may result in the receiver being less aware that a message is trying to persuade him/her, which in turn may lead to less resistance being offered (Hoeken & Fikkers, 2014; Moyer-Gusé & Nabi, 2010).

As far as could be determined, only two related studies by Duizer et al. (2014) and Koops van't Jagt et al. (2017) have investigated how engagement of readers with the narrative may help to explain the effects found in fotonovelas (see Chapter 2 for an in-depth discussion of these studies). The present study will further explore the role of narrative engagement as possible explanation for the effects of fotonovelas. In other words, this study will try to determine to what extent the theoretical constructs related to engagement with a narrative can explain the behavioural attitudes and intentions of readers of a fotonovela about *tik*.

Similar to Duizer et al. (2014) and Koops van't Jagt et al. (2017), the EORM will serve as theoretical framework. The EORM builds on SCT and the E-ELM, and proposes that narratives can, through a number of entertainment features, positively affect the adoption of story-consistent attitudes and behaviours by reducing the initial resistance against perceived pressure to behaviour change (Moyer-Gusé, 2008; Moyer-Gusé & Nabi, 2010). Important roles in this process are played by the already discussed entertainment features *transportation* and *identification*, as well as *perceived similarity* and *para-social interaction (PSI)*. See Figure 1.1.

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Entertainment Feature

Resistance

Outcome

Narrative Structure; Parasocial Interaction; Liking	Reduces →	Reactance
*Transportation; *Identification; Parasocial Interaction	Reduces →	Counterarguing
Enjoyment; Identification	Reduces →	Selective Avoidance
Perceived Similarity; Identification	Increases →	Perceived Vulnerability
Parasocial Interaction	Changes →	Perceived Norms
**Perceived Similarity with an Efficacious Character	Increases →	Self-Efficacy
**Perceived Similarity **Identification	Changes →	Outcome Expectancies

→ Story-Consistent Attitudes and Behaviors

FIGURE 1.1. The Entertainment Overcoming Resistance Model (Moyer-Gusé, 2008).

As mentioned earlier, different theories ascribe different definitions and labels to *transportation* and *identification*. The EORM describes *transportation* as "the process by which an individual becomes immersed into the story, losing track of the real world as he or she experiences the unfolding events in the story" (Moyer-Gusé & Nabi, 2010, p. 29). *Identification* is understood in the EORM as "an emotional and cognitive process whereby a viewer imagines himself or herself as a particular character" (Moyer-Gusé & Nabi, 2010, p. 29). The EORM considers *identification*, *perceived similarity* and *PSI* as related, though conceptually distinct constructs (Moyer-Gusé, & Nabi, 2010, p. 29-30). The differences between these constructs can be understood as follows: During *identification*, a person may take on a character's role and experience the fictitious events as if they happened to him/her, without having anything in common with this character in reality (Moyer-Gusé, 2008, p. 410; Moyer-Gusé & Nabi, 2010, pp. 29-30). *Perceived similarity*, however,

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is defined as how much a person perceives him/herself to have in common with a character in their real life, pertaining to e.g. shared attributes, characteristics, beliefs, and/or values. Moyer-Gusé and Nabi (2010, p.30) describe *PSI* as a "seeming face-to-face relationship between spectator and performer". Different from identification where the perspective of a character is taken, *PSI* entails that a person experiences a character as part of his/her social world, as a well-known acquaintance or perhaps as a best friend. *PSI* can exist even though a person may very well realise that he/she is only connected to a certain character through a pseudo-relationship.

As alluded to earlier, the EORM proposes that *transportation* and *identification* can affect message outcomes in positive ways by reducing the initial resistance to possible change that the audience may have. *Perceived similarity* and *PSI* are also postulated to influence message outcomes in this way. Moreover, the EORM posits that these different entertainment features can overcome different types of resistance to persuasion. Prominent EORM resistance variables include *reactance*, *counterarguing* and *perceived invulnerability* (see Figure 1.1). These concepts are unpacked below.

Universally, people have an inherent need for freedom to make their own choices (Jansen, 2017; Moyer-Gusé, 2008; Moyer-Gusé & Nabi, 2010). *Reactance* relates to this human need of people for independence to determine their own beliefs and attitudes or choose their own behaviour. If a persuasive message is perceived as a threat to this freedom, *reactance* is aroused, triggering the need to reassert independence. This could result in such messages being met with high levels of scepticism or even rejected immediately (Jansen, 2017; Moyer-Gusé, 2008). Another form of resistance is *counterarguing*. Slater and Rouner (2002, p. 180) define *counterarguing* as the "generation of thought that dispute or are inconsistent with the persuasive argument". *Perceived invulnerability* is a type of resistance to persuasion that refers to the belief that a person may have that he/she is uniquely immune to any negative consequences regardless of risky behaviour (Moyer-Gusé & Nabi, 2008, p.33).

The EORM predicts that *transportation* will enhance the persuasion of the message by reducing the motivation and ability to *counterargue* with the message, which will in turn promote story-consistent attitudes and behaviours, because the audience members do not wish to interrupt the

enjoyable and immersive process of being transferred to another world. *Identification* with a character is also associated with less *counterarguing* because a person is adopting that character's perspective, thoughts and feelings (instead of criticizing them). According to Moyer-Gusé & Nabi (2010, pp. 31-32), both *identification* and *perceived similarity* are expected to increase *perceived vulnerability* (i.e. reduce *perceived invulnerability*), leading to story-consistent attitudes and behaviours. Put differently, the EORM expects a person who thinks he/she is *similar* to a character that is portrayed as vulnerable may lead to greater *perceived vulnerability* of that person him/herself. The EORM also postulates that experiencing the actions, thoughts and feelings through *identification* with a character may allow a person who otherwise would feel invulnerable to a specific situation to temporarily feel vulnerable him/herself, thereby leading to greater p*erceived vulnerability*, which will in turn promote story-consistent attitudes and behaviours. The EORM further predicts that *PSI* with a peer is expected to reduce *reactance* and *counterarguing* which will subsequently increase story-consistent attitudes and behaviours, as a peer is perceived to be less controlling and authoritative. Some of the EORM propositions presented here were empirically tested in studies by Moyer-Gusé and Nabi (2010) and Moyer-Gusé et al. (2011), which are briefly discussed next.

Moyer-Gusé and Nabi (2010) conducted an experiment in which 367 young students either watched an episode of the American television series *The O.C.* about the consequences of an unplanned teen pregnancy or a non-narrative documentary about the same subject. Participants completed a questionnaire immediately after the intervention as well as two weeks later. Consistent with what the EORM would expect at both assessments, the results showed that the television programme promoted *PSI* with the characters leading to a reduction in *reactance*, which in turn was associated with greater safe sex intentions. In addition, as expected, *identification* with the characters reduced *counterarguing*. Unexpectedly, *transportation* was associated with an increase in *counterarguing* at the immediate and follow-up assessment and no association was found between *counterarguing* and safe sex intentions. In the follow-up test two weeks later (though not immediately after the intervention), *identification* with the characters also led to an increase in *perceived vulnerability*, which in turn was associated with greater safe sex intentions. Contrary to the EORM prediction, *perceived similarity* was not associated with *perceived vulnerability*, while in line with EORM expectations, a positive association was found between *perceived vulnerability*

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and safe sex intentions. In the other study mentioned above which also tested the principles of the EORM, Moyer-Gusé et al. (2011) randomly exposed 243 participants to one of three versions of an episode of the American television series *Sex and the City*. The first version of the episode contained explicit references to sexual health and sexual history through discussions between the characters; the second version referenced sexual health, but did not include discussions around the topic; and the third version of the episode (the control condition) contained no references whatsoever to sexual health. Participants completed a questionnaire immediately after the intervention as well as two weeks later. Consistent with what the EORM would expect at both assessments for those participants watching the first version of the *Sex and the City* episode, *identification* with the characters lead to a decrease in *counterarguing*, which in turn was associated with greater safe sex intentions and behaviours. Contrary to EORM expectations, *identification* with the characters did not lead to an increase in *perceived vulnerability* and no association was found between *perceived vulnerability* and greater sexual discussion-related intentions and behaviours.

The current study will focus on the effects of *transportation*, *identification*, and *perceived similarity* (in the first column of the EORM) as well as *counterarguing* and *perceived vulnerability* (in the second column of the EORM) as empirical support has been found for propositions involving these variables (Moyer-Gusé & Nabi, 2010; Moyer-Gusé et al., 2011).[5] The following EORM propositions will be tested; formulated as hypotheses 1 – 4 below:

H1: *Identification* is associated with *counterarguing*, which in turn is associated with story-consistent (a) behavioural attitudes and (b) behavioural intentions.

H2: *Identification* is associated with *perceived vulnerability*, which in turn is associated with story-consistent (a) behavioural attitudes and (b) behavioural intentions.

H3: *Transportation* is associated with *counterarguing*, which in turn is associated with story-consistent (a) behavioural attitudes and (b) behavioural intentions.

H4: *Perceived similarity* is associated with *perceived vulnerability*, which in turn is associated with story-consistent (a) behavioural attitudes and (b) behavioural intentions.

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[5] For reasons of brevity i.e. to not over-burden respondents with a lengthy questionnaire, the current study did not include EORM propositions involving *PSI* and *reactance*. See Chapter 4 for more details.

1.5.2.2 Fear-based explanations for fotonovela outcomes (hypotheses 5-6)

Given reported positive effects of fear appeals in health communication (see below), it was decided to include fear appeal characteristics as part of the fotonovela developed for the current study. [6] The emotion *fear* is well known for its possible persuasive effects in a health promotion context through so-called fear appeals. Health communication practitioners use fear appeals to scare people into taking a desired action (e.g. using condoms) by depicting the negative consequences of a specific health issue (e.g. HIV and Aids), or as Witte (1992, p.329) puts it, "the terrible things that will happen to you". The possible role of fear appeals in successfully motivating behavioural changes in accordance with message recommendations has been widely reported (see e.g. Earl & Albarracín, 2007; Ruiter, Kessels, Peters, & Kok, 2014; Tannenbaum et al., 2015; Witte & Allen, 2000; Yzer, Southwell**,** & Stephenson, 2013).

The literature suggests many well-researched theories to explain the effects of fear appeals (see e.g. Ruiter et al., 2014; Witte, Meyer, & Martell, 2001). For the fotonovela developed in the current study, it was decided to employ the Extended Parallel Process Model or EPPM (see below) to help explain possible differences in participants' attitudes and intentions.

The EPPM (Witte, 1998) may be considered as the most influential theory in the fear appeal literature that predicts and explains how fear appeals work. Many health promoters and campaigns using fear appeals base their message decisions on the EPPM (Popova, 2012). The EPPM has been successful to both create and assess messages intended to motivate health behaviour on a variety of health topics.[7] Topics addressed include cardiovascular disease, HIV and Aids, alcohol abuse, chlamydia, kidney disease, meningitis, breast cancer, hearing loss, alcohol warnings, gun safety warnings, skin cancer, bicycle safety, lung cancer, stroke, bulimia, genital warts, and testicular cancer (see e.g. Bowles, 2009; Cameron, Witte, Lapinski, & Nzyuko, 1999; Davis & Jansen, 2016; Davis, Martinelli, Braxton, Kutrovac, & Crocco, 2009; Gore & Bracken, 2005; Kline & Mattson, 2000; Maguire et al., 2010; Morman, 2000; Moscato et al., 2001; Murray-Johnson et al., 2004;

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[6] See Chapter 3 for a detailed discussion of how fear appeal characteristics were incorporated as part of the fotonovela developed for the current study.

[7] Critical reviews of the EPPM can be found in De Hoog, Stroebe, and De Wit (2007), Popova (2012), Ruiter, Abraham, and Kok (2001), and So (2013).

Roberto & Goodall, 2009; Roberto, Krieger, & Beam, 2009; Roberto, Meyer, Johnson, & Atkin, 2000; Roskos-Ewoldsen, Yu, & Rhodes, 2009; Smalec & Klingle, 2000; Smith et al. 2008; Stephenson & Witte, 1998; Witte, Berkowitz, Cameron, & McKeon, 1998; Witte, Cameron, McKeon, & Berkowitz, 1996; Witte, Girma, & Girgre, 2003; Witte, Stokols, Ituarte, & Schneider, 1993; Wong & Cappella, 2009).

Key EPPM constructs are the emotion of *fear*; the cognition of *threat* with its components *severity* (the seriousness or significance of a threat) and *susceptibility* (the risk of experiencing the threat); the cognition of *efficacy* with its components *response efficacy* (the degree to which the recommended response effectively averts the threat); *self-efficacy* (the ability to perform the recommended response to avert the threat) and three types of outcomes (no response, danger control response and fear control response). See Figure 1.2.
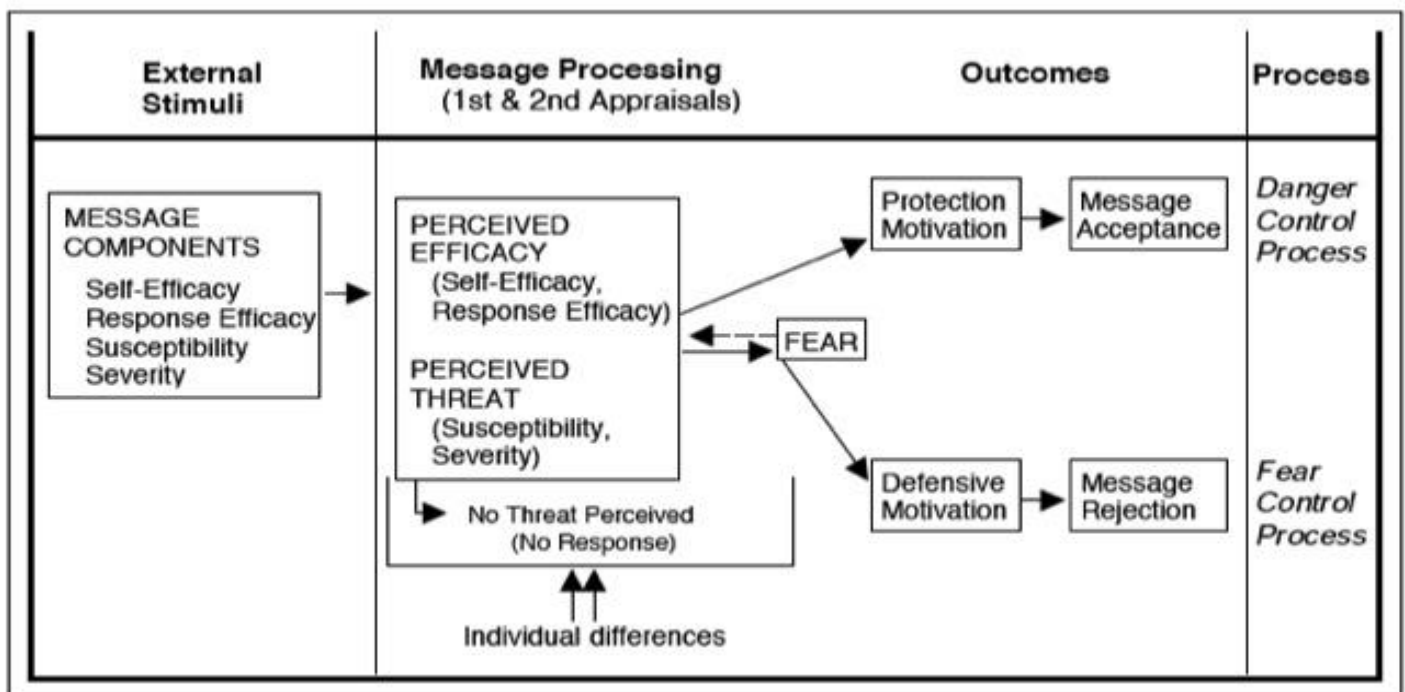
FIGURE 1.2. The Extended Parallel Process Model (Witte, 1998).

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In essence, the EPPM hypothesizes that if people do not perceive the threat to be serious there will be no response. If, however, people perceive a high level of threat resulting from a high level of perceived severity and a high level of perceived susceptibility, they will become scared (high fear). If the level of fear is high, there will be either a danger control or a fear control response, depending on the level of perceived efficacy. If perceived efficacy, resulting from a high level of perceived response efficacy and a high level of perceived self-efficacy, is higher than perceived threat, then a rational reaction, i.e. a danger control response, is predicted: attitudes, intentions and/or behavioural changes in accordance with a message's recommendations. If the level of fear is high, but perceived efficacy is lower than perceived threat, then an emotional reaction i.e. a fear control response, is predicted: defensive avoidance, denial and/or reactance (Davis & Jansen, 2016; So, 2013; Witte, 1994; Witte, 1998; Witte et al., 1996). The following two EPPM propositions, formulated as hypotheses 5 and 6 below, were used as theoretical guidance to determine to what extent theoretical constructs related to fear appeals, may help explain the behavioural attitudes and intentions of readers of the fotonovela.[8]

H5: If perceived efficacy is high, perceived threat is associated with (a) behavioural attitudes and (b) behavioural intentions.

This EPPM proposition posits that when efficacy is high, greater threat leads to greater message acceptance. According to the review of the EPPM by Popova (2012, p.462), the support for this proposition is mixed. Studies which found support for this proposition are, for instance, Smalec and Klingle (2000), Roberto and Goodall (2009), and Wong and Capella (2009). Popova (2013) herself found support for this proposition in a study about the smokeless tobacco product, snus. For smokers with high levels of efficacy, higher perceived threat was related to less favourable attitudes toward snus and lower intentions to try this product.

H6: If perceived efficacy is high, the associations of fear and (a) behavioural attitudes and (b) behavioural intentions are mediated by perceived threat.

This EPPM proposition asserts that threat mediates the relationship between fear and danger control responses (i.e. positive attitudes and intentions) under conditions of high efficacy. Under

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[8] Not all EPPM propositions were applicable to help explain fotonovela outcomes (see Witte, 1992, 1998; Ooms et al., 2015).

such conditions, as Ooms, Jansen, and Hoeks (2015) explain, the EPPM expects fear will be indirectly related to danger control responses, because fear leads to the 'upgrade' of perceptions of threat, as depicted by the feedback loop in Figure 1.2, and threat, in turn, leads to danger control (fear ---> perceived threat –> danger control). Popova (2012) found mixed support for this proposition. Rogers and Mewborn (1976) and Witte (1994) report threat as mediator in the relationship between fear and danger control under conditions of high efficacy, while other studies found a direct effect of fear on danger control outcomes under the same conditions (e.g. Lewis, Watson, & White, 2010; Ooms et al., 2015).

1.5.2.3 The arousal of other emotions (in addition to fear) as explanation for fotonovela outcomes (hypotheses 7 - 10)[9]

Reading a narrative may evoke a full range of emotions, not only fear (Busselle & Bilandzic, 2009, p. 341). Moreover, fear appeals may not only engender fear, but also other emotions, such as surprise, anger or sadness (see e.g. Dillard & Nabi, 2006; Dillard & Peck, 2000; Dillard, Plotnick, Godbold, Freimuth, & Edgar, 1996; Leshner, Bolls, & Thomas, 2009; So, 2013; Tannenbaum et al., 2015). [10] Emotions are assumed to play a role in the narrative persuasion process (Murphy et al., 2013; Oatley, 2002). Several narrative-based studies have shown that emotions such as fear, happiness, joy, sadness, disgust and anger may affect message outcomes (see e.g. Busselle & Bilandzic, 2009; De Graaf et al., 2009; Green & Brock, 2000; Hoeken & Fikkers, 2014; McQueen, Kreuter, Kalesan, & Alcaraz, 2011; Murphy et al., 2013; Murphy et al., 2011). In order to determine to what extent the arousal of emotions (including fear) can explain the behavioural attitudes and intentions of readers of the fotonovela about *tik*, the potential associations between emotions and message outcomes possibly evoked as a result of reading the fotonovela were also measured in the current study.

The definition, nature and classification of emotions have been a point of contention among researchers over the years (Izard, 2007; Myrick & Oliver, 2015). Nabi (2010) states that there are

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[9] Studies of the association between narrative engagement variables and emotions in narrative persuasion are also topical (see e.g. Hoeken & Sinkeldam, 2014; Murphy et al., 2013; Murphy et al., 2011). This avenue of research, however, did not fall within the ambit of the current study.

[10] The fotonovela developed for the current study contained fear appeal characteristics.

two basic models of emotions that guide most of the current research, namely the dimensional view and the discrete view.[11] The dimensional view focusses on a generalized emotional state characterized by two broad dimensions, namely arousal (high/low) and valence (pleasure/displeasure). The discrete view of emotion proposes a limited set of basic emotions that are universal, biological in nature, and have unique physiological and neural pathways that distinguishes them. These emotions include e.g. fear, surprise, anger, sadness, and disgust (see e.g. Ekman, 2000; Izard, 1977; Plutchik, 1980). For the purposes of the current study, the discrete view of emotions will be adopted. The discrete view is seen as advantageous to adopt for explaining the effects of emotions in persuasion as it identifies unique emotions and can predict the onset and action outcomes of these emotions (Nabi, 2010). In addition, the discrete view of emotions has been effectively used in previous studies about emotions and emotional persuasion (see e.g. Banerjee & Green, 2012; Carrera, Muñoz, & Caballero, 2010; Dillard & Shen, 2007; Lewis et al., 2010).

A prominent theory within the discrete view of emotion is the cognitive appraisal theory of emotion (Lazarus, 1991; Nabi, 2010; Smith & Lazarus, 1993; So, 2013). Central to this theory is that cognitive appraisal of a certain event (i.e. what is the significance and meaning of the event for the individual) causes the arousal of basic emotions (Lazarus, 1991; So, 2013). Essentially, this theory proposes that an event is cognitively appraised in a certain way, followed by an emotion linked to the specific appraisal pattern. A coping action is then the response to the emotion aroused because it can release tension (So, 2013). Behavioural components or "action tendencies" mediate the link between emotion and coping actions (Frijda, 1986; Frijda, Kuipers, & Ter Schure, 1989; Lazarus, 1991). These action tendencies propel the organism towards a particular behavioural response. The rationale behind the cognitive appraisal theory of emotion – using the emotion *fear* in a practical example – is as follows: a person sees a snake, cognitively appraises that it is a danger with the probability of harm, followed by the arousal of fear (the emotion), which results in the person coping with the situation by withdrawing/avoiding the snake (the action tendency).

As mentioned, theorists often differ on which emotions constitute basic, fundamental and distinct human emotions. Such a list, however, usually includes *fear, surprise*, *sadness*, and *anger* (see e.g.

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[11] For an alternative classification of psychological models of emotion, see Scherer (2000).

Dillard et al. 1996; Ekman, 2000; Hamann, 2012; Izard, 1977; Lazarus, 1991; Meyer, Niepel, Rudolph, & Schützwohl, 1991; Nabi, 2002b; Oatley & Jenkins, 1992; Plutchik, 1980; Reisenzein, 2000; Smith & Lazarus, 1993). In addition, the emotion of *compassion* has received attention for its possible persuasive effects (Myrick & Oliver, 2015; Oliver, Dillard, Bae, & Tamul, 2012). Henceforth, in addition to fear, the present research focusses on the persuasive effects of surprise, sadness, anger, and compassion. Below, the cognitive appraisal theory of emotion is used to explain how these four emotions work. Research about the persuasive effects of these emotions on behavioural attitudes and intentions is also presented below.

Surprise typically follows the experience of a novel stimulus in the environment, which results in the person coping with the situation by focussing on the stimulus to become familiar with it (the action tendency) (Dillard et al. 1996; Dillard & Nabi 2006; Dillard & Peck, 2000; Frijda et al., 1989; Izard, 1977; Nabi, 1999; Smith & Lazarus, 1993). In a study about the role of transportation in affecting cognitive and effective responses by Banerjee and Green (2012), no affect was found of surprise as a mediator in the association between transportation and message outcomes. In a fear appeal context, Dillard et al. (1996) and Dillard and Peck (2000) report positive effects for surprise on message acceptance, while Davis and Jansen (2016) found that surprise (more specifically: a lack of prior knowledge of efficacy information) influenced intentions in a positive way. In two further fear appeal studies, surprise was found to (a) increase reflection, attitude and intentions towards adopting messages (Timmers & Van der Wijst, 2007), and (b) lead to a rise in attention given to messages (Sheppler, 2009). This leads to hypothesis 7:

H7: Surprise is associated with (a) behavioural attitudes and (b) behavioural intentions.

Sadness typically follows the experience of an irrevocable loss of a source of support, e.g. a loved one or an opportunity, which results in the person coping with the situation through inaction or withdrawal (the action tendency) (Frijda, 1986; Lazarus, 1991; Nabi, 1999; Raghunathan & Corfman, 2004; So, 2013). Raghunathan and Corfman (2004) found that sadness can prepare an individual to seek out pleasurable stimuli because such stimuli may be perceived as a suitable replacement or compensation for the lost object. Sadness also has the potential to motivate problem-solving ability due to introspection (Izard, 1977, 1993). Banerjee and Green (2012) found a negative association between sadness and persuasive message outcomes. However, in a fear

appeal context where sadness was aroused as part of a persuasive message, this emotion was found to have positive effects on outcomes: Dillard et al. (1996) and Dillard and Peck (2000) both report positive effects for sadness on message acceptance. This leads to hypothesis 8:

H8: Sadness is associated with (a) behavioural attitudes and (b) behavioural intentions.

Anger typically follows the experience of a stimulus related to obstacles perceived to interfere with goal-orientated behaviour or a demeaning offence against a person or that person's loved ones, which results in the person coping with the situation by going on attack or in some way getting back at the source of the anger (the action tendency) (Frijda, 1986; Lazarus, 1991; Nabi, 1999). Anger has the potential to (a) promote persuasion based on argument quality (Nabi, 2002a), (b) help organize behaviour (Lemerise & Dodge, 1993), and (c) instigate problem solving thereby doing more good than harm (Averill, 1982). Butler, Koopman, and Zimbardo (1995) and Gault and Sabini (2000, Study 4) found a significant and positive association between anger and message outcomes. However, Nabi (2002a) did not find a significant association between anger and message outcomes. Within a fear appeal context where anger was aroused, Dillard et al. (1996) did not find a significant association between anger on message acceptance, while Dillard and Peck (2000) found a significant and negative association between anger and message acceptance. This leads to hypothesis 9:

H9: Anger is associated with (a) behavioural attitudes and (b) behavioural intentions.

Compassion typically follows the experience of a stimulus related to perceiving another person's suffering, which results in the person coping with the situation by developing an authentic desire to help (the action tendency) (Goetz, Keltner, & Simon-Thomas, 2010; Lazarus, 1991). Oliver et al. (2012) found a direct and positive association between compassion and attitudes. In a study about mixed emotional appeals related to melanoma (skin cancer), Myrick and Oliver (2015) found compassion had an indirect and positive association with behavioural intentions to view an online petition about melanoma through willingness to share information about a video concerning this form of cancer. This leads to hypothesis 10:

H10: Compassion is associated with (a) behavioural attitudes and (b) behavioural intentions.

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1.5.2.4 Associations between behavioural attitudes, behavioural intentions, and knowledge level (hypothesis 11)

The final hypothesis relates to the attitude-intention association based on an influential model of human behaviour, the Integrative Model of Behavioural Prediction or IMBP (Fishbein & Ajzen, 2010). This model is the most recent formulation of prominent work related to models of persuasion by Fishbein and Ajzen. The IMBP is preceded by the theory of reasoned action (Fishbein & Ajzen, 1975) and the theory of planned behaviour (Ajzen, 1985). According to the IMBP, attitude is a function of behavioural beliefs (i.e. beliefs about the likelihood that performing a behaviour will have certain outcomes) and is ultimately a determinant of intention (Yzer, 2012). The IMBP thus predicts that attitude is an important predictor of intention. This prediction is also well supported by several literature reviews and meta-analyses investigating the attitude and intention association (as discussed in Park, 2000, p. 162). As explained in Chapter 4, the current study also tested for the possibility of an association between attitude and knowledge level. This leads to hypothesis 11:

H11: Behavioural attitude is associated with behavioural intention and with knowledge level[12].

1.5.3 The preference for fotonovelas as health communication document (research question 2)

If a fotonovela is found to be effective in communicating messages about *tik* among Coloured people in the Western Cape, such a finding would be of little value if people prefer to read another form of health documentation about this topic instead of a fotonovela when faced with such a choice in a health setting. Perhaps surprisingly, in the fotonovela studies identified as part of the literature search in this study (see Chapter 2), such information about health message preference was never systematically collected. A need therefore exists to gather evidence about the possible preference of people to read fotonovelas instead of other comparable health documents. Research Question 2 (**RQ2**) is phrased as follows:

RQ2: To what extent do Coloured people in the Western Cape prefer a fotonovela about *tik* to a more traditional brochure about this topic?

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[12] These associations were tested for people who read a fotonovela about *tik*, a traditional brochure about *tik*, people who did not read anything at all (control condition), and in the group of participants as a whole. See Chapter 4.

1.6 Summary of the research questions and hypotheses

RQ1: To what extent does reading a fotonovela about *tik* influence the a) the knowledge level, b) behavioural attitudes, and c) behavioural intentions of Coloured people in the Western Cape as compared to reading a more traditional brochure about this topic?

The following hypotheses will be tested in order to come up with possible explanations for differences in participants' attitudes and intentions:

H1: *Identification* is associated with *counterarguing*, which in turn is associated with story-consistent (a) behavioural attitudes and (b) behavioural intentions.

H2: *Identification* is associated with *perceived vulnerability*, which in turn is associated with story-consistent (a) behavioural attitudes and (b) behavioural intentions.

H3: *Transportation* is associated with *counterarguing*, which in turn is associated with story-consistent (a) behavioural attitudes and (b) behavioural intentions.

H4: *Perceived similarity* is associated with *perceived vulnerability*, which in turn is associated with story-consistent (a) behavioural attitudes and (b) behavioural intentions.

H5: If perceived efficacy is high, perceived threat is associated with (a) behavioural attitudes and (b) behavioural intentions.

H6: If perceived efficacy is high, the associations of fear and (a) behavioural attitudes and (b) behavioural intentions are mediated by perceived threat.

H7: Surprise is associated with (a) behavioural attitudes and (b) behavioural intentions.

H8: Sadness is associated with (a) behavioural attitudes and (b) behavioural intentions.

H9: Anger is associated with (a) behavioural attitudes and (b) behavioural intentions.

H10: Compassion is associated with (a) behavioural attitudes and (b) behavioural intentions.

H11: Behavioural attitude is associated with behavioural intention and with knowledge level.

RQ2: To what extent do Coloured people in the Western Cape prefer a fotonovela about *tik* to a more traditional brochure about this topic?

1.7 Ethical considerations

The participants in the current research were asked to fill out a consent form as is usually required in all data collected for empirical research. Although low educational levels are prominent in the areas that were targeted, this research requires that all participants must be able to read and understand Afrikaans (the dominant language of the target group). To guarantee informed consent, the researcher and field workers assisting with the research explained all ethical issues to respondents in a plain, comprehensible Afrikaans, after which respondents were given an opportunity to decide whether they wanted to partake in the research or not (see Chapters 3 and 4 for more details about the field workers).

Participants were not envisioned to fall in any identifiable vulnerable group (e.g. patients). However, it was expected that a high number of respondents might be unemployed with a low socio-economic status and either likely to be *tik* users themselves or live in an environment where using *tik* is commonplace – which possibly made this group vulnerable. The target group's vulnerability in this sense was therefore acknowledged and sensitivity in such matters were taken into consideration during data collection. The researcher made sure that all field workers were fully aware of all the ethical issues that they needed to take into consideration when recruiting participants or assisting with data collection.

Voluntary participation were ensured as participants participated at their own free will. Participants were not be subordinate to the field workers. The field workers worked in the community on a daily basis and were well-known to community members. Confidentiality and anonymity of all participants were safeguarded as real names of participants were not recorded or used in writing up findings. Respondents were mainly asked their thoughts on and immediate responses to the messages and information in the documents presented to them. Respondents might as well encounter similar documents in everyday life when e.g. visiting a clinic and reading a similar brochure in a waiting room or social services office. In reporting the results, care was taken not to report results in a way that would enable any participants to be identifiable or able to be associated with any particular finding. This study constituted a low ethical risk and received full ethical clearance from the Human Research Ethics Committee of Stellenbosch University in July 2015 (see Addendum A).

1.8 Significance of the study

Findings from this study can help lay the foundation for the use of fotonovelas as health communication tool in SA. The results can inform document design specialists on a new, persuasive approach in the design of health information campaigns. Pertaining to the communication of health messages more specifically, the current research may provide new information on what constitutes a successful message design to influence behavioural attitudes and intentions regarding *tik* use in a positive way.

1.9 Organization of the remainder of the chapters

Chapter 2 contains a review of the literature related to fotonovelas as health communication tools, expanding upon the information presented in this chapter. The development of the fotonovela used in the current research is unpacked in Chapter 3. Chapter 4 focusses on the evaluation of the fotonovela, encapsulating **RQ1**, **H1** - **H11**, and **RQ2** discussed earlier in the current chapter. Chapter 5 contains the findings of a waiting room intervention study conducted to determine how the fotonovela may be valued in a primary health care setting, in order to provide additional clarity regarding **RQ2**. The dissertation concludes with a general discussion in Chapter 6, which contains a synopsis of Chapters 1 - 5 and presents practical implications of the research project as a whole for health message practitioners.

CHAPTER 2. LITERATURE REVIEW ON FOTONOVELAS IN HEALTH COMMUNICATION

2.1 Introduction

The aim of this chapter is to provide a critical overview of fotonovela studies where this medium was employed as health communication tool. The main objective is to elaborate on and provide context for some of the arguments presented and subsequent research questions and hypotheses proposed in Chapter 1.

The first section of the current chapter will start with a short synopsis of the origin of fotonovelas. This is followed by a systematic explanation of how the search was conducted to identify the studies included as part of the literature review. Details are then given of the guidelines followed to analyse and unpack these studies. An examination of each selected study then ensues. Next, an attempt is made to summarize, compare and critically evaluate the main findings from the different studies by grouping these findings together under four central themes (these themes are discussed later in this chapter). During this discussion of the main findings, possible suggestions for new empirical research into the effects of fotonovelas as health communication tools are also presented. Lastly, implications for the current study are discussed.

2.2 Fotonovelas: A brief history

Fotonovelas originated in Italy in the years following World War Two as so-called *fotoromanzo*, containing mainly romantic and soap opera type content. A famous actress, such as Sophia Loren, and many other actors and actresses, launched their acting careers by starring in *fotoromanzo*. During the late 1940s and 1950s, fotonovelas gained popularity and had spread to France and Spain, as well as Latin America. During this time, this format served as a type of surrogate or by-product to cinema, containing a summary of popular Hollywood films for the less wealthy, as attending cinemas at the time was expensive for the average person on the street. New stories were also developed that were only produced as fotonovelas, with the fotonovela developing into its own unique medium (Boyte et al., 2014; Schimming, 2002). In the 1960s, 1970s and 1980s,

fotonovelas became especially popular in Latin America and Mexico as a communication and entertainment medium (Flora, 1980). According to Hérner (1979), 70 million fotonovela copies were being published monthly in Mexico in 1979.

Around 1980, Latin American countries started producing fotonovelas that were not necessarily adaptations of famous movies. Three main types of fotonovelas were developed: *Novelas Rosas* (containing dramatic text and storylines based on love, marriage and family life), *Novelas Suaves* (depicting the daily struggles of the middle class), and the most popular type of fotonovela, namely the *Novelas Verdes* (focussing on sex and violence and often depicted through pornographic images) (Flora, 1980). Because of the popularity of *Novelas Verdes*, the fotonovela format evolved, with pocket size versions being produced. This was necessitated as people did not want to be seen reading these fotonovelas in public. This, in turn, lead to more taboo subject matter forming part of these fotonovelas. Today, different types of fotonovelas are still popular, especially in Latin America (where they are often loaned, rented and resold), as well as the southern parts of Europe and among the Latino/Hispanic community in the USA (Cabassa et al., 2011; Jansen, 2013).

Krings (2010) reports that SA was instrumental in introducing fotonovelas to the English-speaking parts of Africa. In SA, fotonovelas became popular among both black and white communities during the 1960s and 1970s. During this time, Italian *fotoromanzi* were translated into English and entered the South African market. With filmmaking in Africa still new and expensive, these translated fotonovelas thus served as a surrogate for popular movies, similar to the *fotoromanzi* in Europe in the post-World War Two era. Fotonovelas became especially popular in SA from 1965 onwards, with booklets being locally produced. During this time, "African Film", a series published weekly from 1968 to about 1972 by Drum Publications in SA, proved particularly popular among black audiences. For white audiences, the first fotonovelas featured white characters such as Captain Devil of the South African Secret Police (Krings, 2010). Other popular titles in the 1960s and 1970s included *Ruiter in Swart* ("Rider in Black") and *Die Swart Luiperd* ("The Black Leopard"). Recently in SA, new issues of popular 1960s fotonovela titles (especially among white audiences at the time) such as *Ruiter in Swart* have been re-produced with much success (L. Esterhuizen from Protea Bookstore, personal communication, September 4, 2015).

Different organizations in the USA have used fotonovelas to communicate their messages. Examples from pre-2000 include the American Red Cross, Aids Service groups and the Environmental Protection Agency (Valle et al., 2006). More recently, American organizations that have used health-based fotonovelas include (a) the Institution for Health Promotion and Disease Prevention Research at the University of Southern California and the Healthcare Management Corporation (*Sweet Temptations* – a fotonovela about diabetes, see Section 2.5.5 for a discussion), and (b) the California Department of Public Health Immunization and the Fotonovela Production Company (*An ounce of prevention* – a fotonovela about Human Papillomavirus or HPV, see Section 2.5.11 for a discussion). In the Netherlands, fotonovelas have been used to convey awareness messages about Gay-Straight-Alliance among middle- and high school children (Jansen, 2013). In Africa, health-based fotonovelas – albeit in most cases cartoon sketches of well-known TV programmes – have been used in Zambia to convey HIV and circumcision messages; as well as by the Soul City Institute for Health Development and Education in SA to address different health issues (Jansen, 2013).

2.3 Health-related fotonovela literature search

A search of various electronic indexes and databases were conducted to look for health-related fotonovela studies (e.g. All Academic, CINAHL, PSYCHINFO, PROQUEST, EBSCOHOST, MEDLINE, ERIC, PICARTA, Scopus, PUBMED, Google Scholar, Science Direct, British Library Direct). Keyword combinations used included "fotonovela", "fotonovella", "photo novel", "photonovel" "photo-novel", "photo-novella", "photo story", "picture book" "health message", "health communication", "health education", "health literacy", "entertainment-education narratives", and "entertainment-education". Only health-related fotonovela studies were considered for inclusion as part of the literature review. A strict format was followed to present and discuss the health-based fotonovela studies identified (see below). This was done in order to make it easier to draw comparisons between the different studies.

2.4 Structure for analysing the health-related fotonovela studies

The health-related fotonovela studies identified during the literature search were unpacked and reported on by following the structure below:

1. **Study context**
   a. Who conducted the study?
   b. When was the study conducted?
   c. What did the study entail –
      i. The evaluation of an existing fotonovela?
      ii. The development of a new fotonovela?
      iii. The development and evaluation of a new fotonovela?
   d. What was the health issue addressed?
   e. Who was the target group?
   f. Where was the study conducted?
   g. Why was this format deemed appropriate to use in the specific health context?

2. **Fotonovela development (where applicable)**
   a. What research strategies were used to develop the fotonovela?
   b. What were the procedures followed?

3. **Fotonovela evaluation (where applicable)**
   4. What research design was used to evaluate the fotonovela?
   a. What were the variables measured?
   b. What were the findings?
   c. What explanations were given for the effects of the fotonovela?
   d. What recommendations were made to improve the effect of the fotonovela?
   e. What limitations in terms of the research design of the study were highlighted?
   f. What suggestions were made for future research related to fotonovelas?

Sixteen fotonovela studies adhered to the inclusion criteria and were selected for discussion as part of the literature review. These studies were scrutinized and unpacked next by following the abovementioned structure. Below, the 16 fotonovela studies are labelled in terms of their authors

and the health topics addressed and presented in chronological order according to their publication date.

2.5 Discussion of the selected health-related fotonovela studies

2.5.1 Dick et al. (1996) – TB

Dick et al. (1996) developed a health education booklet about TB adherence issues in the form of a fotonovela for Coloured, Afrikaans-speaking audiences in Cape Town in the Western Cape province of SA.

The decision to develop the health education booklet in the form of a fotonovela was based on the target audience's level of literacy and their low socio-economic status. The Coloured, Afrikaans-speaking target group was considered to be semi-literate (i.e. average level of education being Grade 8). The reasoning was that participants would be more likely to understand and follow a health message about TB if it was presented in fotonovela format, as this format predominantly consists of photos and contains little text. Secondly, the target audience was largely of low socio-economic status, which, according to the authors, made it unlikely, that they would have access to magazines or books. Fotonovelas were viewed as a more viable alternative in this regard. The study was explorative in nature and consisted of three phases.

The decision to develop a fotonovela about TB was only made in Phase 2 of the study, as the researchers first wished to be guided by the results of Phase 1. During Phase 1, the feelings, attitudes, beliefs and perceptions of TB patients' experiences of this disease were ascertained through focus group discussions. A clear need was identified during this phase for psychosocial support to deal with the difficulties these patients have to overcome. For the first part of Phase 2, an assessment of available pamphlets and posters revealed that current health documents did not address the need to deal with the psychosocial aspects of TB, as they mainly focussed on the biological aspect of the disease. The researchers therefore decided that the content of the educational tool should focus on the actual experiences and problems perceived by the target group. During the remainder of Phase 2, the fotonovela was developed. One of the focus group participants from Phase 1 who had completed her TB treatment took part in a key informant

interview to share her everyday TB-related experiences and problems. This participant's responses consequently served as source information for the development of a script for the fotonovela.

The narrative of the fotonovela was about the experiences of a mother diagnosed with TB and the struggles she had to go through to complete her treatment. The story mainly focussed on the effects the diagnosis had on her personal life, including the rejection she experienced from people for having TB. The novel also included a letter at the end, written by the patient in the story so to personalize the story for readers. Moreover, a calendar to mark off each day of the reader's treatment formed part of the booklet to enhance the patient's sense of responsibility.

Although the effectiveness of the fotonovela developed was not empirically tested as part of the study, the results from an informal evaluation through focus group discussions (Phase 3 of the study) showed promise for using this medium as an effective health education tool. During these sessions, participants were asked to give their impressions of the fotonovela. Feedback showed that participants identified with the main character, felt the novel gave them insight into issues around TB, and considered the novel to be a resource of TB information they were willing to share with friends and family.

2.5.2 Cabrera et al. (2002) – TB

Cabrera et al. (2002) developed three related fotonovelas about TB adherence aimed at primarily Spanish-speaking, Latino immigrants receiving TB treatment in County Public Health clinics in Los Angeles, California, USA.

The decision by the researchers to employ fotonovelas to address health issue around TB was based on three factors. Firstly, the target audience was reported to have low literacy levels. Based on this observation, the researchers argued that their health messages should be presented in fotonovela format as previous research found fotonovelas to be an effective medium to communicate health messages to low-literate audiences. Secondly, with fotonovelas being popular in Latin America and the target audience mainly consisting of Latino immigrants, participants were expected to be familiar with the fotonovela format. Participant familiarity with fotonovelas was therefore expected to boost the effect of the health message if presented in this format. Thirdly, the storylines in fotonovelas typically depicted the everyday realities of communities that the target

group belonged to. Referencing the findings from peer-reviewed studies, the authors argued that incorporating health messages in situations target audiences were accustomed to and could identify with, might improve its chances of success. The authors subsequently proposed the use of fotonovelas to promote responsible TB-related health behaviour.

The study was descriptive in nature, with three fotonovelas developed over different stages using a formative evaluation approach. The first stage involved a review of previous TB-related knowledge, attitudes, beliefs and behaviours (KABB) studies conducted among Latino immigrants. Next, a baseline survey was done to determine the TB-related KABB of Latino immigrants treated for TB at clinics in the target area. The findings of the baseline survey mirrored the results of previous KABB surveys among Latino immigrants collected beforehand in a number of areas, including the levels of TB knowledge and social stigma. The next stage encompassed the development of the content and format of the fotonovela. The results from the review of previous KABB studies and KABB survey done with TB patients from the target group provided the basis for the content and rationale of the story. The idea here was to include TB information that the target group was unfamiliar with or lacked as part of the message content. Three different fotonovelas were developed addressing different themes, among other, TB symptoms and mode of transmission, TB stigma issues, the role of personal support from friends or family, and completing care/medication regimes. The different fotonovelas included a 'reminder' page of key points to keep in mind about TB and its transmission.

The fotonovelas were written in simple English and translated to Spanish by bilingual undergraduate students to address the low literacy levels of the target audience. The Spanish versions of the novels were field tested for comprehension by evaluating the reading level of each story to ensure its suitability for the target audience. Content and language familiar to the target group were incorporated to make the story readable and understandable. In addition, culturally based health beliefs that were deemed appropriate to use in the context of the story were included to increase the persuasiveness of the message. Real clinics sites served as settings and actual health care providers were employed as actors to give the novel a more personal feel. In other words, personal cues were used to increase the appeal of the message for participants.

As the TB information in the fotonovelas was simplified to make it more understandable to readers, the next stage of the development process focussed on ensuring that all the facts were still accurate. Medical professionals subsequently verified the TB information. This was followed by a field test of the fotonovelas among current TB patients to assess the readability, comprehension, credibility, and cultural relevance of the fotonovelas. A final revision of the fotonovelas by different experts followed and focussed on the readability and the accuracy of the Spanish translations. Lastly, a final editorial review was done before the fotonovelas were printed and distributed to clinics.

2.5.3 James et al. (2005) – STI's

James et al. (2005) evaluated the effects of a fotonovela (*Laduma*) about STI's (including HIV and Aids) among secondary school learners in the KwaZulu-Natal province of SA.

Little information was shared as to why a fotonovela approach was used to address issues around STI's. It seemed the effectiveness of *Laduma* was investigated because it "is one of a few print media Aids education interventions that was developed systematically in Africa and therefore warranted to be evaluated" (p. 160).

The story for *Laduma* was developed through workshops with youths from Khayelitsha and Gugulethu in Cape Town as well as Kwamashu, Inanda and Thornwood in KwaZulu-Natal. *Laduma* was specifically targeted to appeal to the youth. *Laduma* was thus developed in conjunction with the target audience. In the *Laduma* story, the reader is provided with factual information about STI's. This information is conveyed in the story through responses by a clinic nurse and discussions among the lead characters in the story. The story also included an incident of unfaithfulness on the part of one of the characters, which leads to intense discussion among the main characters involving their relationship, commitment to each other and the role of condoms in their sexual lives. There was a questions and answers (Q&A) section in the back of the fotonovela to reinforce some of the factual information presented in the different scenes.

An experimental research design was employed to test the effectiveness of *Laduma*. There was an intervention group who read the fotonovela and a control group who received no message. Outcomes from the two groups were measured over three time periods (T1, T2, and T3). T1 was

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conducted at baseline where both groups were asked to respond to the same baseline questionnaire (the intervention group did not read *Laduma*). During T2 (done three weeks later), the control group completed the same baseline questionnaire. The intervention group read *Laduma* after which they completed a questionnaire containing baseline questions and questions specific to this fotonovela. T3 was conducted 6 weeks later. Here, the control again completed the same baseline questionnaire while the intervention group again completed the same questionnaire from T2 (they did not read *Laduma* again).

The dependent variables measured in the study were: (1) *knowledge about* (a) *the spread of STI's* and (b) *the cause of STI's*, (2) *attitude towards* (a) *condom use* and (b) *persons infected with STI's or HIV and Aids,* (3) *intention to use condoms in the future*, (4) *behaviour related to* (a) *sexual activity* and (b) *condom use during sex*, and (5) *communication about STI's, HIV and Aids and prevention thereof with* (a) *parents,* (b) *friends,* and (c) a *boyfriend/girlfriend*.

In total, 1 168 learners from 19 schools took part in the study, with 10 schools forming part of the control group and nine schools part of the intervention group. The following significant effects were found. The intervention group had significantly higher levels of *knowledge about the spread of STI's* compared to the control group at both T2 and T3, while scores did not differ at baseline. Within the intervention group, knowledge scores differed significantly between T1 and T2, with the same levels maintained at T3. Participants who read the fotonovela had more positive *attitudes to condom use* both at T2 and T3 compared to participants in the control group, while scores did not differ at baseline. Within the intervention group, attitude scores differed significantly between T1 and T2, with the same levels maintained at T3. Lastly, respondents who read *Laduma* reported significantly higher levels of *intention to use a condom in the future* compared to participants in the control group (measured at T3 only). No significant effects were found for any of the other dependent variables.

No explanations were given for the positive effects found for the fotonovela nor were recommendations made to improve the effectiveness of this health document. No limitations of the study in terms of the research design were highlighted and there were no suggestions for future research related to fotonovelas.

2.5.4 Valle et al. (2006) – Dementia

Valle et al. (2006) developed and evaluated the effectiveness of two fotonovelas about dementia (Alzheimer's disease) aimed at Spanish-speaking, older Latino adults in San Diego County, California, USA.

The motivation behind the use of fotonovelas to address health concerns related to dementia among older Latinos was mainly based on the low levels of literacy found in this cohort. Citing evidence from the literature, the authors stated that health-related fotonovelas are specifically effective to address the problem of low literacy and health literacy. Hence, fotonovelas were deemed appropriate to convey health information to older Latinos. The authors also highlighted the need for a health educational tool about dementia that can be culturally and linguistically adapted for this cohort. As fotonovelas can be culturally and linguistically adapted for specific audiences, it provided further motivation for the use of fotonovelas to address health concerns related to dementia among older Latinos.

Two Spanish fotonovelas about dementia were developed in the study: a shorter novel and a novel with an extended plot. The development of the fotonovelas was not discussed in detail by the authors. The fotonovela content mainly focussed on common myths, related disorders, the importance of family to deal with the disease, service access and utilization issues, and the diagnostic process. Initial validation of the fotonovelas was conducted among the target group in association with an Alzheimer's support organization.

An exploratory design with post-test only sessions immediately after reading the fotonovela (Session 1) and three weeks later (Session 2) were employed in the study. At Session 1, participants were requested to read the shorter of the two fotonovelas developed and complete a related questionnaire to evaluate the novel. They were given the second, extended fotonovela developed for the study to take home. The session ended with an open discussion afterwards related to the materials or any questions they might have. At Session 2, participants again completed the same questionnaire followed by another open discussion as during Session 1.

The dependent variables were *prior knowledge and experience with Alzheimer's disease or dementing illness,* and *knowledge of Alzheimer's disease*. The data of 111 participants that attended both Session 1 and Session 2 were used in the study. Results showed that participants overwhelmingly liked the fotonovela and found it interesting and understandable. There was a significant learning gain for *knowledge of Alzheimer's disease* when comparing the overall number of questions answered correctly during Session 1 and Session 2. The greater improvement for *knowledge of Alzheimer's disease* was associated with middle-aged and bilingual participants.

The positive effects found for the fotonovelas were attributed to the discussion sessions conducted at the end of Session 1 as well as to participants having the opportunity to discuss and share the health information in the fotonovela with each other during and between data collection sessions. The possible effects of having discussion sessions as part of fotonovela evaluation interventions were suggested to be investigated in future studies. No recommendations were made on how to improve the effectiveness of the fotonovelas. Limitations of the study in terms of the research design included the use of convenience sampling and the lack of employing a pre-test prior to reading the fotonovelas.

2.5.5 Unger et al. (2009) – Diabetes

Unger et al. (2009) evaluated a fotonovela about diabetes called *Sweet Temptations*. The study was conducted among Hispanic adults in Los Angeles, California, USA.

Sweet Temptations was evaluated to determine its appropriateness for communicating information about diabetes to Hispanic audiences as fotonovelas (a) have an engaging E-E narrative format, (b) have proven successful among medically underserved audiences such as the target group, (c) is a well-known form of entertainment in the Hispanic community, and (d) is a proven medium to effectively deliver health messages for low-literate audiences such as the target group in question.

A Hispanic writer in consultation with diabetes experts and health promotion experts developed the *Sweet Temptations* storyline. The story incorporated information about diabetes symptoms, prevention methods and treatment options. The languages (English and Spanish) used in the 24-

page novel included local idioms of the Hispanic culture in Los Angeles. The booklet contained a Q&A section, a glucose test strip coupon and a sponsor's advertisement.

An experimental design which included immediate pre-test and post-test sessions were conducted with participants ($n = 311$) completing a questionnaire, reading the fotonovela for 30 minutes, and then again completing the same questionnaire immediately thereafter. The dependent variables were *diabetes knowledge* and *behavioural intentions*. After the participants had read *Sweet Temptations*, there was a statistically significant increase in correct answers to knowledge questions about diabetes, with scores increasing from 66% answers correct before reading the novel to 86% answers correct post-intervention. Intentions to (a) *exercise in the next six months,* (b) *eat fruit and vegetables,* (c) *talk to a doctor or a pharmacist about diabetes,* and (d) *talk to a family member about diabetes* were significantly higher compared to the scores for these items before the participants had read the fotonovela. The greatest increases in *diabetes knowledge* and *behavioural intentions* occurred among younger respondents.

The positive effects found for the fotonovela were attributed to (a) a general lack of prior experience of respondents with diabetes (specifically younger participants) resulting in positive outcomes, and (b) participant engagement with the storyline and characters. No recommendations were made to improve the effect of the fotonovela. A limitation related to the research design was that participants were not being followed longitudinally. The authors suggested that future studies should focus on the impact of fotonovelas on behaviour change.

2.5.6 Cabassa et al. (2011) – Depression

Cabassa et al. (2011) evaluated a fotonovela about depression called *Secret Feelings*. The target population was the same audience for whom *Secret Feelings* was originally developed, namely Latinos with limited English proficiency (LEP). The study setting was Los Angeles, California, USA. The reasons why fotonovelas were deemed appropriate to address health concerns around depression among Latinos with LEP are discussed in Cabassa et al. (2012; see Section 2.5.7), where the development of *Secret Feelings* is described.[13]

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[13] The study by Cabassa et al. (2012) which describes how *Secret Feelings* was developed, was published after Cabassa et al. (2011), which evaluated this fotonovela.

The authors note that little is known about how culturally appropriate health communication tools are accepted by specific audiences as such evaluations had seldom been attempted before, and more specifically, how adapted health information about depression is accepted by language minorities such as Latino adults with LEP (p.840). *Secret Feelings* was thus evaluated to establish how audiences perceive health communication tools that are culturally and linguistically developed explicitly for them. This study can be considered as a follow-up to the study by Cabassa et al. (2012), where it was suggested that future studies should test the effectiveness of *Secret Feelings* (p. 753).

A descriptive research design employing focus groups was used in this study. Participants ($n = 32$) first completed a demographic questionnaire and were given 20 minutes to read the fotonovela. The focus group discussion was guided by questions probing participants on, e.g. what they liked and disliked about the novel (format, storyline, and characters), what they learned about depression and its treatments, and how they would use the fotonovela in their community.

Results showed that participants found the fotonovela interesting, educational and easy to understand. They believed the fotonovela increased their knowledge about depression symptoms and treatments as well as giving them confidence to help those suffering from the disease. They saw the fotonovela as an essential educational tool to help raise awareness around depression, battle stigma and embarrassment related to the disease, and change perspectives for the better. Participants liked the format because (a) the information was perceived as accessible, clear, and easy to understand, (b) the story was funny and realistic, and (c) they could identify with the story and characters. Respondents expressed a need for more colour photos and a more detailed storyline. They generally felt that they had learned a lot about depression and were well equipped to help friends or family with depression-related issues. Respondents viewed the fotonovela as a discrete and non-threatening tool they could share with someone "without the stigma of giving them a brochure that has the words depression or mental illness on the cover" (p.844). A suggestion was made to adapt the fotonovela for different mediums e.g. the internet and television.

A conceptual model proposed by Cabassa et al. (2012) which hypothesizes how *Secret Feelings* was expected to influence message outcomes, was used to explain the overall positive effects

found. This model proposes that the effect which exposure to a fotonovela (in this case *Secret Feelings)* has on attitudinal and behavioural outcomes is mediated by three communication process variables (*audience engagement*, *audience identification* and *interpersonal communication*). *Audience involvement* is defined as the degree to which readers relate the story to their personal experiences. *Audience identification* is described as the extent to which readers personally identify with the characters and other key features of the story. The third variable, *interpersonal communication*, is defined as the extent to which readers share or talk about the information presented in the fotonovela with friends and/or family. Cabassa et al. (2011), however, did not empirically test this conceptual model, with the authors instead proposing that their study provided qualitative evidence to support this conceptual model and that this model should henceforth be tested in future studies.

Recommendations made in terms of improving the effect of *Secret Feelings* were to (a) expand content that addresses common health concerns, (b) develop the storyline and characters further, and (c) include colour photos. Limitations highlighted in terms of the research design was (a) the lack of using an experimental research design to test causal relationships between exposure to the fotonovela and changes in attitudes and behaviours, and (b) a small sample size. As mentioned, a suggestion for future research related to testing the causal relationship between exposure to the fotonovela and changes in attitudinal and behavioural outcomes and to identify communication process variables acting as possible mediators in this relationship.

2.5.7 Cabassa et al. (2012) – Depression

Cabassa et al. (2012) developed a fotonovela called *Secret Feelings* about depression aimed at Latinos with LEP based in the USA.

Citing the literature, the authors state that individual-level factors which prevent Latinos with LEP from seeking help for depression-related issues include (a) low levels of health literacy, (b) a lack of knowledge about depression, (c) negative attitudes toward depression treatment, and (d) depression-related stigma. These factors, the authors argue, negatively influence the recognition of depression symptoms and discourage Latinos from seeking and making use of formal mental health care services. In addition, few health programmes about depression exist that specifically

cater to Latinos with LEP. Based on these observations, the authors suggest that a health educational tool about depression that is culturally and linguistically adapted can be effective to overcome the barriers to care that these individual-level factors present, and thus effectively communicate a health message about this condition. It was put forward that health-related fotonovelas meet this criteria. Firstly, referencing the findings from peer-reviewed studies, the authors say that the fotonovela is a popular format often used as an educational tool with low-literate audiences. Secondly, its E-E format and cultural adaptibility makes it possible to engage audiences and raise awareness of health issues. In summary, fotonovelas were used in this study to address health concerns around depression based on its ability to (a) convey health messages to low-literate audiences, (b) be culturally and linguistically adapted for specific audiences, and (c) entertain and engage audiences while conveying a health message.

Secret Feelings was developed based on the notions from two health behaviour theories. Firstly, the self-regulatory model of illness cognition or perception was used to tell/explain to the reader how the characters in the story experienced depression, focussing on e.g. the characters' symptoms and beliefs about treatments.[14] Secondly, the principles of a broadly used health behaviour theory, namely the theory of reasoned action, was employed to improve the chances of the fotonovela being effective in decreasing misconceptions about depression treatments and increasing intentions to seek professional help. This was done by targeting readers' attitudes toward depression treatments and the social norms associated with seeking professional help to deal with this illness.[15] The E-E strategy, which included a six-step production process (see below), also informed the development of *Secret Feelings*. Social Cognitive Theory (Bandura, 1977, 2004) and the Model of Culture-Centric Narratives (Larkey & Hecht, 2010), in turn, guided the application of the E-E strategy.

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[14] Illness perceptions are the organized cognitive and emotional representations/beliefs that people hold about illness. These perceptions have been found to be important determinants of health-related behaviour (Cameron & Leventhal, 2003; Unger et al., 2009).

[15] The theory of reasoned action suggests that a person's behaviour is determined by the intention to engage in that behaviour. Behavioural intentions, in turn, are thought to be determined by attitudes and social norms. An attitude is a person's opinion or belief about whether a certain behaviour is positive or negative. A subjective norm describes the social pressure an individual feels to perform or not perform a certain behaviour. Together, attitudes and subjective norms are thought to determine behavioural intentions (Fishbein & Ajzen, 1975).

The findings from two pilot studies by Cabassa, Lester, and Zayas (2007) and Cabassa, Hansen, Palinkas, and Ell (2008) among low-income, mostly Spanish-speaking immigrant Latinos informed the development of the content and storyline for *Secret Feelings*. The aim of these two studies was to gain insights into perceptions of depression and attitudes towards depression treatments. The first study presented a hypothetical situation about a person suffering from depression to find out how perceptions of depression and attitudes towards depression treatments and social norms affected intentions to seek help. The second study employed focus groups and interviews to examine illness perceptions, attitudes toward care, and help-seeking behaviours. The findings from these studies provided information about the actual knowledge and perceptions of Latino audiences concerning dementia. The findings identified (a) a lack of knowledge about dementia symptoms, (b) the important role of family and friends to instigate help-seeking behaviours, and (c) the misconceptions about antidepressant medications as pressing issues among the target audience. These issues were consequently factored in when writing the story and developing the characters for *Secret Feelings*.

A team that included a pharmacist, a social work researcher, and a fotonovela producer led the production process. The team also consulted with various stakeholders during the different stages of development, which included, among others, community members, actors, and funding agencies. The six-step production process entailed (a) the formulation of objectives, (b) storyline development, (c) script development, (d) producing the fotonovela, (e) translating the fotonovela to Spanish, and (f) designing the layout and printing the fotonovela, with input from the stakeholders during the different phases of this process. The production process is briefly discussed next.

The objectives of the study were formulated as the first step in the production process after checking several depression-based studies and past research, through team meeting discussions, and asking experienced clinicians and researchers for their input. It entailed, inter alia, increasing the knowledge level of symptoms of depression and reducing stigma. The content of the storyline included salient cultural themes and norms and included characters who were similar to the target population so they could serve as positive role models. The storyline was developed with input from various stakeholders. A professional writer of Hispanic descent and based in Los Angeles

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assisted with writing a simple script that catered to low-literates (pitched at a Grade 4 reading level). This scriptwriter was vastly experienced and had previously produced numerous screenplays and productions about life in urban Los Angeles. Stakeholders were consulted to review the script and provide inputs for revision. After making revisions, a reading of the script was done where the production team and other stakeholders asked four main questions, namely, (a) is the script easy to follow, (b) are the messages clear, (c) is the story entertaining, and (d) does the story reflect the culture, values, and norms of the target audience? Next followed the production of the fotonovela. The production included, among others, the scheduling of dates and times for the shoot, securing of locations, selecting the wardrobe, hiring community actors and a make-up artist, renting photographic equipment, and assembling a production support team. Next, the fotonovela was translated into Spanish. The fotonovela was also back-translated and the language, idioms, and expressions used were also reviewed by different stakeholders. This was followed by the graphic design process, which included designing the cover, credits and the Q&A pages. Only a few copies were initially printed, as this draft version of the fotonovela was firstly piloted among community members not linked with the production of the novel. They were asked to provide comments and input regarding content, style, length, and design. The feedback from community members was then incorporated into the final version of the fotonovela.

2.5.8 Unger et al. (2013) – Depression

Unger et al. (2013), similar to Cabassa et al. in 2011 (see Section 2.5.6), again evaluated the depression-themed fotonovela *Secret Feelings* (developed by Cabassa et al., 2012; see Section 2.5.7). Similar to the study by Cabassa et al. (2011), this study targeted Latinos with low health literacy and was conducted in Los Angeles, California, USA. The reasons why fotonovelas were deemed appropriate to address health concerns around depression among Latinos with LEP are discussed in Cabassa et al. (2012; see Section 2.5.7).

As with the study by Cabassa et al. (2011), *Secret Feelings* was evaluated to establish how audiences perceive health communication tools that are culturally and linguistically developed explicitly for them. Unger et al. (2013) employed an experimental research design in the form of a longitudinal randomized controlled trial. It consisted of a pretest session and two post-test

sessions, i.e. immediately after message exposure and then again one month later. There were two treatment groups, namely a fotonovela group and a more traditional text pamphlet group. Participants were randomly assigned to receive either the fotonovela or the text pamphlet. They completed a survey before reading the material, immediately thereafter, and one month later. The dependent variables were *depression knowledge*, *antidepressant stigma, stigma about mental health care*, *willingness to seek help for depression*, *self-efficacy to identify depression*, *dissemination of the fotonovela through social networks*. Demographic covariates, i.e. *age*, *gender*, *language*, and *education*, were also measured.

A total of 185 participants took part in the immediate pre- and post-test sessions. At the one month follow-up, 139 participants were included in the sample. The following results of note were found. At baseline, there were no significant differences between the two groups for *depression knowledge*. However, at the immediate post-test there were significant increases for both groups compared to baseline. Moreover, the knowledge gain in the fotonovela group at post-test was significantly higher compared to the text pamphlet group. At the one month follow-up, the difference between the groups was again non-significant. For *antidepressant stigma* at baseline, there were no significant differences between the two groups. At the immediate post-test, *antidepressant stigma* had decreased significantly in the fotonovela group compared to the text pamphlet group. For *mental health care stigma*, there were no significant differences between the groups at baseline or the immediate post-test. However, at one month follow-up, the fotonovela group had significantly lower levels of *mental health care stigma* compared to the text pamphlet group. There were no significant differences between the two groups for any of the other variables at baseline, immediate post-test or one month follow-up. In terms of *dissemination of the fotonovela through social networks*, participants were significantly more likely to report that they gave *Secret Feelings* to someone else compared to the text pamphlet group. Those reading *Secret Feelings* were also significantly less likely to report that they threw the reading material away compared to the text pamphlet group.

No explanations were offered by the authors as to why *Secret Feelings* was successful. No recommendations were made in terms of how to improve the effect of the fotonovela. Limitations of the study in terms of the research design included not measuring the effect of fotonovelas on

actual behaviour (which was suggested to form part of future studies). Another shortcoming related to the researchers not investigating whether other elements of the fotonovela (e.g. the dramatic story, pictures, and the characters) made *Secret Feelings* superior to the text pamphlet. It was suggested that investigating this possibility should form part of future research.

2.5.9 Hernandez and Organista (2013) – Depression

Hernandez and Organista (2013), similar to Unger et al. in 2013 (see Section 2.5.8) and Cabassa et al. in 2011 (see Section 2.5.6), again evaluated the depression-themed fotonovela *Secret Feelings* (developed by Cabassa et al., 2012; see Section 2.5.7). Hernandez and Organista targeted Latinos with low health literacy. This study was conducted in California, USA, specifically in the San Francisco area. The reasons why fotonovelas were deemed appropriate to address health concerns around depression among Latinos with LEP are discussed in Cabassa et al. (2012; see Section 2.5.7).

As with the studies by Cabassa et al. (2011) and Unger et al. (2013), *Secret Feelings* was evaluated to find out how audiences perceive health communication tools that are culturally and linguistically developed explicitly for them. Hernandez and Organista (2013) followed a pre- and post-test randomized control group experimental design. A treatment group read the fotonovela while a control group was exposed to discussion of family communication and intergenerational relationships. The dependent variables were *depression knowledge*, *stigma towards depression treatment*, *self-efficacy to identify the need for treatment*, and *intent to seek treatment*. Other variables measured included depression symptoms, health literacy levels, treatment history and demographic information (e.g. age, marital status, employment status, access to health insurance, country of birth, years in the USA, highest level of education, and family income).

A total of 142 participants took part in the immediate pre- and post-test sessions. The following results of note are reported. Significant differences between the two groups were found for *depression knowledge*, *self-efficacy to identify the need for treatment* and *stigma towards depression treatment* with increases from pre to post mean scores for the experimental group. There was a marginally significant difference for *intent to seek treatment* between the two groups with increases from pre to post mean scores for the experimental group. Similar to the findings of

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Unger et al. in 2013 (see Section 2.5.8), who also evaluated *Secret Feelings*, the fotonovela was found to be effective to convey health messages about depression to Latinos with low health literacy. Moreover, as with the evaluation by Unger et al. (2013), *Secret Feelings* was found to be effective to increase depression-related knowledge and self-efficacy to identify the need for treatment, while reducing stigma towards depression treatment.

No explanations were offered by the authors as to why *Secret Feelings* was successful. No recommendations were made in terms of how to improve the effect of the fotonovela. Limitations of the study in terms of the research design included (a) having a relatively small sample size, (b) the lack of pre-intervention equivalence of both control and intervention group, and (c) the control group intervention being delivered in a more interactive way compared to the fotonovela intervention, possibly influencing the control group's intent to seek treatment. A suggestion made by the researchers for future research applicable to *Secret Feelings* (or other culturally adapted narratives) was to build on the limited number of available theories about cultural factors and how it may influence health behaviour outcomes, so to better understand and be able to more extensively analyse cultural-centric narratives.

2.5.10 Lee et al. (2013) – Hepatitis B

Lee et al. (2013) developed and evaluated the effectiveness of three fotonovelas about Hepatitis B aimed at Chinese, Korean, and Vietnamese Americans, respectively, in Maryland, USA.

Hepatitis B is considered a major health problem among Asian Americans. Despite this fact, screening and vaccination for Hepatitis B remain low in this cohort. The authors cite previous studies where it was found that low rates of screening and vaccination for Hepatitis B among Asian Americans are commonly associated with (a) low awareness and knowledge of this disease, (b) a limited grasp of English, (c) low levels of health literacy, and (d) cultural barriers. Hence, the authors suggest that culturally and linguistically appropriate information should be incorporated in Hepatitis B health education material in order to overcome these obstacles and increase screening and vaccination rates for this disease. Fotonovelas are put forward as an appropriate medium to convey information about Hepatitis B to Asian Americans as it can be adapted to appeal to the culture and norms of specific groups for health communication purposes. In addition, the

authors reference previous fotonovela studies which found this medium to be successful in communicating health messages to vulnerable and immigrant populations as well as populations with low literacy levels and LEP – in other words, groups sharing similar demographic characteristics and shortcomings comparable to Asian Americans in this study. For these reasons then, three different fotonovelas about Hepatitis B were developed in this study for three Asian American communities, namely Chinese, Korean, and Vietnamese Americans.

The authors highlight the importance of intentions and self-efficacy as determinants of health behaviour as identified by the theory of reasoned action and the Health Belief Model. [16] They state the three fotonovelas were designed "to help our study participants increase their intention and self-efficacy to have Hepatitis B screening by increasing perceived vulnerability, perceived benefits, motivation to comply, knowledge to overcome perceived barriers, and by providing cues to action" (p. 695). However, exact details were not given of how this was executed.

Formative research, using eight focus groups, was employed to help guide the development of the three fotonovelas. The focus group sessions involved participants from all three Asian American communities targeted in the study. The sessions explored participants' knowledge, perception, and experience of Hepatitis B and liver cancer, as well as their perceived barriers of prevention. Common problematic issues across all three groups identified, included low levels of Hepatitis B knowledge and awareness of risk factors associated with this disease. Participants were also asked for their opinions on the layout, design, content, and readability of existing health education brochures about Hepatitis B and liver cancer prevention as well as to rank the brochures they had read in terms of how much they had learned from reading them. Findings showed that participants (a) preferred brochures which were brief and written in plain and simple language, (b) felt that brochures should be relevant to Asian American target groups, (c) suggested the use of Asian Americans on the cover, and (d) believed that the focus should be on Hepatitis B prevention and not on sufferers of the disease. Based on this focus group feedback, three distinct fotonovelas were culturally tailored for each group. Actors for the novels were recruited from each of the three Asian

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[16] The Health Belief Model was first conceptualised in the 1950s by social psychologists in an effort to understand why people failed to participate in programmes to prevent or detect disease (see e.g. Strecher, Champion, & Rosenstock, 1997).

American communities and the photo shoot was conducted at familiar locations in the communities where the target group lived. The fotonovelas were developed in English, Chinese, Korean, and Vietnamese; it also contained factual information and a Q&A section at the back. A medical professional checked the content of the novel for accuracy. The fotonovelas were piloted with community members and with co-investigators of the project taking part. Pilot testing focussed on cultural relevance, level of performance of the actors, clarity of the content, and overall design. Based on the feedback, minor changes were made to the storyline and layout.

The experimental phase of the study involved a randomized community trial with a post-test only study at one month. The intervention component included a presentation, a role-play video, and a Q&A session. At the end of the intervention, participants from the different sub-populations were asked to read the fotonovela. One month later participants evaluated the novel they had read by completing a questionnaire which was mailed in the post to them. In total, 347 participants who had responded to the mail and had read the brochure were included in the experimental group.

The degree to which participants found the information in the fotonovelas effective and culturally appropriate were measured by participants having to indicate whether they thought the fotonovelas were (a) helpful, (b) written by someone who knows the community, (c) easy to understand, (d) a good teaching tool, and (e) recommendable to others. The dependent variables were *self-efficacy for Hepatitis B screening* and *intention to go for Hepatitis B screening*. Covariates included *age*, *gender*, *education*, *income*, *health insurance coverage*, *English proficiency*, and *ethnicity*.

Findings showed that the majority of participants agreed or strongly agreed that the information in the fotonovela was helpful, written by someone who knows the community, easy to understand, and should be recommend to others. More than 80% of participants thought the fotonovela they had read was a good teaching tool. Overall, favourable evaluation of the fotonovelas (i.e. finding the fotonovelas effective and culturally appropriate) was associated with both *self-efficacy for Hepatitis B screening* and *intention to go for Hepatitis B screening*. These associations were the strongest among participants with lower income and education levels.

The high cultural relevance of the fotonovelas and the use of plain language and picture-based instructions were highlighted as possible reasons for the positive effects found. To explain how culture relevance may have improved the effectiveness of the fotonovelas, the authors allude to the role of the narrative engagement variable *identification* playing a role, by stating "Readers might see themselves in the fotonovela and feel ownership […]" (p. 701). No recommendations were made by the authors on how to improve the effectiveness of the fotonovelas. Limitations highlighted in terms of research design included (a) the possible influence of desirability bias in the data collection methods used, (b) a lack of probability sampling to recruit participants, and (c) a possible priming effect as a result of respondents being asked to read the fotonovelas after having been exposed to an information sessions about Hepatitis B. No suggestions were made for future research related to fotonovelas.

2.5.11 Boyte et al. (2014) – HPV

Boyte et al. (2014) developed and evaluated a fotonovela about HPV aimed at Hispanic females in California, USA. HPV is a sexually transmitted virus.[17]

Referencing factual statistical information, the authors say that cervical cancer disproportionally affects Hispanic women in California, and can be prevented through e.g. regular screening for HPV, by raising awareness of HPV vaccination or through education efforts. The authors argue that a lack of targeted culturally appropriate health information about HPV is one of the contributing factors to the high cervical cancer incidence among Hispanic females. According to the authors, if such culturally appropriate education materials are developed for this cohort to help address the lack of HPV prevention efforts, it must be presented through a medium which would be able to overcome the low levels of literacy and health literacy which is found among this group. Fotonovelas are put forward as an appropriate medium to convey HPV information to Hispanic females by the authors as it can be adapted to appeal to (a) audiences with low levels of literacy and (b) the culture and norms of specific groups. For these reasons then, a fotonovela to raise

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[17] According to the authors, most cases of cervical cancer are caused by HPV.

awareness about HPV vaccine, pap smears and HPV immunization was developed to appeal to Hispanic females. Specifically, the fotonovela targeted Latina mothers to have their pre-teen children vaccinated against HPV.

The fotonovela development was guided by an advisory committee (consisting of two health educators, two medical doctors, a public health nurse, a public health consultant, and immunization coordinators) convened by the Californian Department of Public Health, as well as a company which specializes in making fotonovelas, namely the Fotonovela Production Company. The fotonovela was developed to be (a) suitable for low-literates, (b) culturally appropriate (specifically the story, message, photos and actors), and (c) to the point (whilst fitting naturally into the informality of this medium). Myths and barriers about HPV vaccine and possible solutions on how to address them were among the issues included in the fotonovela. A local theatre company recruited actors to star in the fotonovela.

The evaluation phase of the study included an experimental research design, using an immediate pre- and post-test survey ($n = 22$). A statistically significant gain was found from pre-test to post-test for all measures of knowledge. Focus group discussions were conducted after the completion of the pre and post-surveys with the same participants (serving as a field test to develop a final version of the fotonovela). Qualitative findings from the focus groups showed that participants (a) liked health messages being conveyed through a fotonovela format, (b) understood the main messages, and (c) found it easy to find specific information in the fotonovela. During the focus group sessions, suggestions were made by participants on how to improve the effect of the fotonovela. These suggestions included e.g. simplifying and clarifying certain medical terms, and adding a Q&A section to address issues related to HPV that went beyond the story and dialogue. Moreover, copies of the fotonovela were distributed at Latino-orientated clinics in the area. Anecdotal evidence revealed that HPV vaccine initiation rates rose considerably after women had read the fotonovela in waiting rooms at these clinics (rates increased between 20-30%).

No explanations were given for the positive effects found of the fotonovela. Limitations highlighted with regards to the research design included (a) focus groups being too small and exploratory in nature, (b) a lack of random sampling, and (c) the possibility of participant self-

selection and social desirability bias in the focus groups. Suggestions for future studies included the development of a digital version of the fotonovela in the form of a "webnovela" and exploring the effects of the fotonovela on actual behaviour.

2.5.12 Duizer et al. (2014) – Diabetes

Duizer et al. (2014) evaluated a translated version of the fotonovela *Sweet Temptations* (similar to Unger et al., 2009; see Section 2.5.5). The study was conducted among low-literates in the Netherlands. *Sweet Temptations* was translated into Dutch for this study (called *Zoete Verleiding*), keeping all pictures and formatting the same and only changing the names of characters to names that would be familiar to Dutch participants. The Q&A section included in the original English and Spanish versions of the booklet was excluded in the Dutch version. This section was excluded as one of the study objectives was to determine and explain the persuasive effect of a narrative (see below). Including a Q&A section would have made it unclear to what extent possible effects could be attributed to the fotonovela's narrative format.

Low levels of literacy are considered to be a problem among at least 1.1 million people between the ages of 16 – 65 in the Netherlands. General literacy, according to the authors, is closely related to health literacy. Many people from this low literacy cohort are therefore expected to have low levels of health literacy as well. Both low literacy and health literacy, the authors argue, are often associated with poor health outcomes (e.g. being ill more often, more prone to chronic illnesses, having a higher mortality rate). Low-literates also regularly have more health-related complaints compared to high-literates due to a lack of understanding of health information in traditional health documents. The authors suggest the use of fotonovelas to convey health information to low-literates as a possible alternative to help overcome problems experienced by this group with understanding traditional health documentation. The authors quote previous studies which demonstrated that fotonovelas, with their limited text and many photos, may be an effective medium to communicate health information to people with low literacy levels. *Zoete Verleiding* – a fotonovela about diabetes – was therefore deemed suitable to communicate messages about diabetes to low-literate groups in the Netherlands. In addition, evidence from the literature is presented which indicate that little is known as to why fotonovelas have been found to be effective health communication tools. The authors suggest that the narrative format of fotonovelas may help

to explain possible effects found. They suggest employing a theoretical model, the EORM, to help guide the process of determining to what extent the narrative format of a fotonovela may help to explain the effects found.

An immediate post-test only research design, with two treatment conditions and one control condition, was used. There was an experimental group who read the fotonovela and another experimental group who read a traditional diabetes brochure. The control group only answered questions about diabetes knowledge and behavioural intentions. Participants (N = 92) were randomly assigned to one of the three groups. The two experimental groups first read the materials and then completed the questionnaire, while control group participants completed the questionnaire only. The dependent variables were *diabetes knowledge* and *behavioural intentions*, drawing on similar items used in the evaluation of *Sweet Temptations* by Unger et al. (2009).

In terms of *diabetes knowledge*, results showed the fotonovela participants had the highest score, followed by the traditional brochure participants and control group participants. There was a significant difference in knowledge scores between (a) the fotonovela participants and the traditional brochure participants, (b) the fotonovela participants and those participants in the control condition, and (c) the traditional brochure participants and those participants in the control condition. Significant differences were found for *intention to eat fruit* and for *intention to talk to a family member about diabetes* between (a) the fotonovela participants and those participants in the control condition, and between (b) the traditional brochure participants and those participants in the control condition. No significant differences were found between the fotonovela participants and traditional brochure participants for *intention to eat fruit* or for *intention to talk to a family member about diabetes*.

Additional dependent variables included the EORM variables *transportation*, *identification*, *perceived similarity, counterarguing*, and *perceived vulnerability.* Little support was found to conclusively suggest the effects found for the fotonovela could be explained by elements related to engagement with the narrative. There was also little support for the relationships between the EORM variables based on what this model would expect. That is, no support was found for the EORM propositions regarding the indirect effects of *identification*, *transportation* or *perceived*

similarity on behavioural intentions via *counterarguing* and/or *perceived vulnerability*. However, a significant and positive direct effect was found for *transportation* on *intentions to eat vegetables*. No significant effect was found for the proposed mediator in this relationship, namely *counterarguing*. A significant and positive direct effect was also found for *identification* on *intention to eat vegetables*. However, no significant effects were found for the mediators proposed by the EORM in this relationship, namely *counterarguing* and *perceived vulnerability*.

No recommendations were made in terms of improving the effect of the fotonovela. Limitations highlighted in terms of the research design employed to test the effectiveness of the fotonovela included (a) only comparing one fotonovela with one traditional brochure, (b) using a relatively small sample size, (c) creating variables with relatively low Cronbach's alphas, and (d) not measuring the long-term effects of the fotonovela. Suggestions made for future research related to fotonovelas include (a) investigating the role of culture in fotonovela persuasiveness, (b) studying the impact of using real life events to guide storyline development, (c) determining whether there is an optimal length for a fotonovela, and (d) exploring the influence of using explicit arguments as part of the narrative dialogue between characters.

2.5.13 Chan et al. (2015) – HPV

Chan et al. (2015) developed and evaluated a fotonovela about HPV aimed at young Hispanic/Latino adults in Southern California, USA.

Similar to Boyte et al. (2014), Chan et al. (2015) reference factual statistical information about HPV which show that cervical cancer disproportionally affects Hispanic males and females in California, while vaccination rates remain low in this cohort. A lack of knowledge and low health literacy skills among Hispanics are presented as reasons why these vaccination rates remain low. The authors further argue, again along the same lines as Boyte et al., that there is a lack of culturally appropriate health interventions about HPV targeted at this population. Fotonovelas are put forward as an appropriate medium to convey HPV information as this health message tool (a) is a familiar message format to this target group, (b) incorporates dramatic storylines, (c) is appropriate for audiences with low levels of literacy, (d) integrates social norms, and (e) depicts positive role models. For these reasons then a culturally and linguistically tailored fotonovela to increase HPV

vaccine knowledge, attitudes, and intentions was developed to appeal to young adults from low-income Hispanic communities.

The fotonovela developed by the researchers was based on the tenets of the Health Belief Model. It was piloted with members of the target audience to ensure cultural and linguistic appropriateness of its different components. The fotonovela consisted of 18 pages, contained a Q&A section at the end, and was written at a sixth-grade reading level. It was pre-tested with target group members prior to finalization.

The evaluation phase of this study included an experimental research design, using an immediate pre- and post-test survey (N = 41). The dependent variables that were measured pre- and post-test were *perceived susceptibility to HPV*, *perceived benefits of vaccination in a committed relationship*, *attitude and intention toward HPV vaccination*, and *intention to encourage family and friends to vaccinate*. Other dependent variables measured post-test only were *attitude towards fotonovela content* and *perceived knowledge gain*. A positive and significant difference was found for *perceived susceptibility to HPV* and *attitude towards HPV vaccination* post- vs. pre-test intervention. For *attitude towards fotonovela content*, almost all participants viewed the fotonovela as entertaining, educational and easy to read, and perceived the information as important. More than half of the respondents identified with the characters and related to the story. The most frequent *perceived knowledge gain* from reading the fotonovela related to the risk of HPV infection despite condom use.

Possible explanations suggested for the positive effects found of the fotonovela related to the narrative engagement variable *identification*. Some respondents indicated that they identified with the characters in the fotonovela, prompting the researchers to remark that "this finding brings up the possibility of other elements of narrative processing that may be important for changing behaviour" (p. 7). The authors do not scrutinize this possible explanation for the positive effects found any further, but do suggest that future researchers should do so. Other suggestions for future studies related to the fotonovela include (a) exploring its generalizability to different audiences, (b) investigating its long-term impact, (c) scrutinizing its level of effectiveness in conjunction with other educational interventions, and (d) looking at alternative avenues and media outlets to

distribute the fotonovela to reach larger audiences. Limitations highlighted in terms of the research design included the lack of a control group, and a small sample size.

2.5.14 Gallagher-Thompson et al. (2015) – Depression

Gallagher-Thompson et al. (2015) developed and evaluated a fotonovela about depression aimed at Latino caregivers of dementia care recipients in California, USA.

Referencing factual statistical information, the authors state that Latino caregivers of dementia sufferers spend more time on caregiving tasks compared to their non-Latino white counterparts, mainly as a result of the higher levels of behavioural problems experienced among Latino dementia sufferers compared to non-Latino white dementia sufferers. Spending more time with dementia sufferers, in turn, leads to an increase in stress and frustration among Latino dementia caregivers, which ultimately results in higher levels of depression symptoms among Latino dementia caregivers compared to their non-Latino white counterparts. The researchers highlight several studies from the literature, which reported significant depressive symptoms associated with Latino caregivers, with a lack of familial support often found to be a contributing factor in this regard. Fotonovelas are put forward as a low-cost, easy obtainable approach to address depression issues among Latino dementia caregivers. This medium was also deemed appropriate in the light of a need for additional education on caregiving for Latino dementia caregivers, and the low levels of health literacy found among this group.

The content of the 20-page fotonovela developed by the researchers in this study was largely based on the findings from 10 focus groups conducted in Northern and Southern California among Latino caregivers and service providers working with Latino families. The fotonovela encouraged the uptake of resources that can help to manage depression, and contained information about coping skills for caregiver stress and self-assessment of depression. No further details were given about the development of this fotonovela.

An experimental research design was employed to test the effectiveness of this fotonovela, with an intervention group who read the fotonovela and a control group who read a standard information brochure (55 participants in each condition). Outcomes from the two groups were measured via

self-reported measures at baseline, after 4 months, and after 6 months. Participants were encouraged to read the materials several times during the six months period and to share the information with family and friends. The *level of depressive symptoms/stress over time* (dependent variable) was measured at the three different time intervals. Researchers also made monthly calls at the end of Month 1, 2 and 3 to determine the *extent to which materials were read*, *how often materials had been read*, and *the helpfulness of materials* (all measured as dependent variables). Main findings showed a significantly larger decrease in the *level of depressive symptoms/stress* for the intervention group who read the fotonovela when compared to the control group who read a standard information brochure. When compared to the control group who read a standard information brochure, the findings of the monthly calls made at the end of Month 1, 2 and 3 geneally showed that participants in the intervention group who read the fotonovela reported (a) reading the booklet more often, and (b) finding it more helpful. In terms of sharing the health materials with family or friends, it was found that participants in the intervention group who read the fotonovela were more likely to share the fotonovela with family and friends compared to participants in the control group who read a standard information brochure.

A possible explanation put forward for the positive effects found of the fotonovela was that participants could relate to its narrative format. Face-to-face meetings with a facilitator to highlight the major points of the fotonovela were suggested as a possible way to improve the effectiveness of the fotonovela. Limitations highlighted in terms of the research design were the relatively small sample size, and not determining the effects of the fotonovela over an extended time period. A suggestion for future research related to the fotonovela was to focus on the storyline, pictures, and characters in order to determine if and how these elements influence message persuasiveness.

2.5.15 Koops van't Jagt et al. (2016) – Doctor-patient communication

Koops van't Jagt et al. (2016) developed a series of seven short fotonovela strips about doctor-patient communication (as well as narrated video clips thereof) aimed at older adults with limited health literacy. Participants and stakeholders in the Netherlands and Hungary were involved in the development of the fotonovela strips.

The authors argue that appropriate doctor-patient communication is an important part of personalized health care, specifically for older adults who may suffer from various chronic diseases. Referring to studies by McCaffery, Smith, and Wolf (2010), and Zamora and Clingerman (2011), the authors state that older adults often have limited health literacy, which is essential for doctor-patient communication to be successful. Citing the literature further, the authors suggest that narrative health messages show promise to improve the effectiveness of health literacy interventions. Fotonovelas, in particular, were deemed appropriate in this specific context, as they have shown to be effective for adults with low levels of literacy.

The fotonovela strips were developed using a formative evaluation approach and a stepwise, bottom-up procedure, which included five distinct phases. Phase 1 involved a literature review and stakeholder analysis to identify relevant health literacy issues related to doctor-patient communication. The findings from this literature review highlighted the need for simple interventions (e.g. the use of clear and familiar language by the doctor) in order to improve doctor-patient communication. The stakeholder analysis, which included interviews with health care professionals who often work with older adults with health literacy problems, revealed that participants valued the importance of doctor-patient communication and thought that addressing health literacy issues through appropriate interventions were needed. Phase 2 consisted of focus group discussions to gain a better understanding of the target population and identify relevant barriers, needs, and preferences concerning doctor-patient communication issues identified in Phase 1. Barriers identified included, for example, contextual factors such as the doctor's availability and doctor-related factors such as overwhelming information. Phase 3 involved role-play exercises in a process of cocreation of the fotonovela strips with members of the target group to identify authentic target group solutions and strategies to overcome the barriers identified in Phase 2. The fotonovela strips were developed next, in Phase 4. In this phase, the findings from the first three phases were integrated to develop and produce storylines and sketches based on narrative elements (such as *transportation* and *identification*) and theories such as Bandura's SCT (1977). In Phase 5, the fotonovela strips were piloted with some of the Dutch focus group members who took part in the focus group discussions in Phase 3. Positive feedback was received from some participants who said, among others, that the fotonovela strips were lively, covered important themes, and should be distributed in waiting rooms and in care facilities.

2.5.16 Koops van't Jagt et al. (2017) – Diabetes

Koops van't Jagt et al. (2017) evaluated *Zoete Verleiding,* the Dutch version of the diabetes-based fotonovela *Sweet Temptations*, using data of participants from Duizer et al. (2014) who also evaluated this fotonovela and continued with data from a new group of participants.

Similar to Duizer et al. (2014), Koops van't Jagt et al. (2017) sketch the problem of low levels of general literacy and health literacy among at least 12% of the Dutch population between 16 and 65 years, which often results in such persons having poor health outcomes. The authors propose that a possible reason for poor health outcomes in this cohort could be a lack of understanding of traditional health documentation. Citing the literature, the authors suggest narratives may be an effective alternative to communicate health information to people with low literacy levels. A specific type of narrative, namely the fotonovela, is suggested, as it is a proven medium to successfully communicate health information to people with low literacy levels. *Zoete Verleiding* was therefore deemed appropriate to communicate health messages about diabetes to Dutch people with low literacy levels. The health issue addressed in *Zoete Verleiding* was moreover considered topical, as diabetes (specifically Type 2 diabetes) is especially prevalent among adults with low levels of literacy in the Netherlands.

As discussed earlier, the original version of *Zoete Verleiding*, i.e. *Sweet Temptations*, was culturally tailored for Hispanic audiences. The researchers argue that if *Zoete Verleiding* was found to be successful among Dutch readers, this may serve as proof that fotonovelas tailored for other cultures need only to be translated for other groups with no need to create different fotonovelas for different groups. Along the same lines, it is claimed that if this fotonovela is found to be effective for participants with varying levels of literacy, it may serve as proof that no measures in this regard need to be considered when disseminating this fotonovela. The authors subsequently propose to test *Zoete Verleiding* among readers with a high level of literacy and readers with a low level of literacy.

An experimental research design using an immediate post-test approach was followed. Participants were divided into two groups, namely those with low literacy levels and those with high literacy levels. For the low literacy group, the data of the participants from the study by Duizer et al. (2014)

were used. Of the 92 participants in the study by Duizer et al., the data of 89 participants were eventually included. The data from the remaining three participants were omitted as these participants, none of whom had Dutch as their mother tongue, had received a form of higher education. For the high literacy group, additional data from 113 participants were collected. The data from the low and high literacy groups were then analysed according to three conditions employed: a fotonovela condition, a traditional brochure condition and a control condition. The dependent variables were similar to the study by Duizer et al., namely *diabetes knowledge* and *behavioural intentions*.

Consistent over both literacy groups for *diabetes knowledge*, the fotonovela participants had significantly higher knowledge scores compared to the traditional brochure participants, while participants from both the fotonovela group and traditional group had significantly higher knowledge scores compared to those participants in the control condition. No significant differences were found between the fotonovela group and the other two groups for *behavioural intentions*. Similar to the study by Duizer et al. (2014), the authors also wanted to find out whether the effect of fotonovelas on message outcomes may be explained by engagement with the narrative. The EORM was here also employed to put this possible explanation to test. Additional dependent variables therefore included the EORM variables *transportation*, *identification*, *perceived similarity, counterarguing*, and *perceived vulnerability.* Little support was found for the EORM predictions regarding the indirect effects of *identification*, *transportation* or *perceived similarity* on behavioural intentions via *counterarguing* and/or *perceived vulnerability*. Only one significant and positive total effect for *transportation* on the intention *to talk to a doctor or pharmacist* was found (no direct or indirect effects were reported when segmenting this total effect).

A recommendation to improve the effect of *Zoete Verleiding* related to the Q&A section, which formed part of the original English and Spanish versions of the booklet (*Sweet Temptations*), but was excluded in the Dutch version thereof. Similar to Duizer et al. (2014), this was done as one of the study objectives was to determine and explain the persuasive effect of a narrative. Including a Q&A section would have made it unclear to what extent possible effects could be attributed to the fotonovela's narrative format. In contrast to the evaluation of the original version of the fotonovela

(*Sweet Temptations*) by Unger et al. (2009), no effects on intentions were found by the authors in the current study. *Sweet Temptations*, however, included a Q&A section, which *Zoete Verleiding* did not. Referencing a study by Moyer-Gusé, Jain, and Chung (2012), the authors' state that combining a narrative with an explicit persuasive appeal such as a Q&A section have proven successful in previous studies to influence health-related behaviour in a positive way. The authors subsequently argue that had they included the Q&A section in *Zoete Verleiding* as well, it may have improved this fotonovela's persuasiveness. No limitations of the study in terms of the research design were highlighted. Suggestions for future research related to fotonovelas were exploring other possible pathways (apart from the EORM) to explain the outcomes of health-based narratives as well as the possible role the cultural background of the reader can play in fotonovela effects.

2.6 Discussion of the main findings from the literature review

2.6.1 Introduction

Lee et al. (2013, p. 695) remark that only a few studies have explored the use of fotonovelas as a possible option to communicate health information. Based on the limited number of studies that could be identified as part of the literature search in the current chapter, this still seems to be the case. However, the findings from the available studies show promise for health-related fotonovelas having positive effects on people's behavioural attitudes and intentions and on knowledge levels related to the health issue in question. More empirical research is needed, however, to endorse the viability of fotonovelas as possible health communication tool. So far, only two of the identified health-related fotonovela studies were conducted in a South African context (James et al., 2005; Dick et al., 1996). Both studies yielded encouraging findings. More research on the effects of health-related fotonovelas in SA is consequently welcome.

In the remainder of this section, the main findings from the literature review are summarized and critiqued under four themes, namely, (a) the motivation for using fotonovelas in a health promotion context, (b) research strategies used to develop health-related fotonovelas, (c) research designs used to evaluate health-related fotonovelas, and (d) explanations for the effects found of health-related fotonovelas (see Tables 2.1 – 2.4).

2.6.2 The motivation for using fotonovelas in a health promotion context

TABLE 2.1
Summary of the reasons for using fotonovelas in a health promotion context

Fotonovela Article	Health Issue	Motivation for using fotonovelas in a health promotion context
Dick et al. (1996)	TB	• Effective for audiences with low literacy levels • Cost-effective
Cabrera et al. (2002)	TB	• Effective for audiences with low literacy levels • Familiarity of target audience with this format
James et al. (2005)	STI's	• No information provided
Valle et al. (2006)	Dementia	• Effective for audiences with low literacy levels • Can be culturally and linguistically adapted for specific audiences
Unger et al. (2009)	Diabetes	• E-E narrative format • Effective for underserved population • Effective for audiences with low literacy levels • Familiarity of target audience with this format
Cabassa et al. (2011)	Depression	• See Cabassa et al. (2012)
Cabassa et al. (2012)	Depression	• Effective for underserved population • Effective for audiences with low health literacy levels • Can be culturally and linguistically adapted for specific audiences • E-E narrative format

Unger et al. (2013)	Depression	• See Cabassa et al. (2012)
Hernandez & Organista (2013)	Depression	• See Cabassa et al. (2012)
Lee et al. (2013)	Hepatitis B	• Effective for audiences with low literacy and health literacy levels • Can be culturally and linguistically adapted for specific audiences
Boyte et al. (2014)	HPV	• Effective for audiences with low literacy and health literacy levels • Can be culturally adapted for specific audiences
Duizer et al. (2014)	Diabetes	• Effective for audiences with low literacy and health literacy levels
Chan et al. (2015)	HPV	• Effective for audiences with low literacy and health literacy levels • Can be culturally and linguistically adapted for specific audience • Familiarity of target audience with this format • E-E narrative format
Gallagher-Thompson et al. (2015)	Dementia	• Cost-effective; easily obtainable • Effective for audiences with low health literacy levels
Koops van't Jagt et al. (2016)	Doctor-Patient Communication	• Effective for audiences with low literacy and health literacy levels
Koops van't Jagt et al. (2017)	Diabetes	• Effective for audiences with low literacy and health literacy levels

As Table 2.1 shows, a fotonovela approach in a health communication context is most often used when a target group (a) has low levels of literacy and/or health literacy, and (b) is in need of culturally and linguistically adapted health information. As would be expected, in cases where the target group is already familiar with the pure entertainment-type version of fotonovelas (which is the case in many parts of Latin America), this format is often used in a health promotion context. Fotonovelas are also often selected because of its E-E narrative format through which health information can be conveyed in an informal and entertaining way.

2.6.3 Research strategies used to develop health-related fotonovelas

TABLE 2.2
Summary of the research strategies used to develop health-related fotonovelas

Fotonovela Article	Health Issue	Research strategies used to develop fotonovelas
Dick et al. (1996)	TB	• Focus groups with TB patients • Interview with a TB patient • Assessment of current health documentation
Cabrera et al. (2002)	TB	• Descriptive study using a formative evaluation approach • Review of TB-related studies • KABB study survey among target group • Factual verification by experts • Field-tested among TB patients • Final revisions by experts
James et al. (2005)	STI's	• Workshops with youths from target audience
Valle et al. (2006)	Dementia	• Validation among target group
Unger et al. (2009)	Diabetes	• Input from subject-field experts
Cabassa et al. (2011)	Depression	• See Cabassa et al. (2012)

Cabassa et al. (2012)	Depression	- Theoretical approach and E-E strategy employed - Two pilot studies among target group - Six-step production process with input from subject-field experts, stakeholders and target audience - Field-tested among target audience
Unger et al. (2013)	Depression	See Cabassa et al. (2012)
Hernandez & Organista (2013)	Depression	See Cabassa et al. (2012)
Lee et al. (2013)	Hepatitis B	- Formative evaluation approach - Focus groups with target audience - Factual verification by experts - Field-tested: target audience and co-investigators
Boyte et al. (2014)	HPV	- Input from subject-field experts - Field-tested with focus groups among target audience
Duizer et al. (2014)	Diabetes	See Unger et al. (2009)
Chan et al. (2015)	HPV	- Theoretical approach - Pilot study among target group - Pre-tested among target group
Gallagher-Thompson et al. (2015)	Dementia	Focus groups with target audience
Koops van't Jagt et al. (2016)	Doctor-Patient Communication	- Formative evaluation approach and stepwise, bottom-up procedure - Literature review and input from subject field experts - Focus groups using target audience - Role-play exercises using target audience - Planning, development (involving a theoretical approach) and production - Pilot study among target audience
Koops van't Jagt et al. (2017)	Diabetes	See Unger et al. (2009)

As can be seen in Table 2.2, in many cases, the fotonovela development phase involved input from the target group themselves. James et al. (2005) highlight the importance of participation from the target audience in the development phase of the fotonovela. Citing the literature, these authors say "print media development […] that is developed in conjunction with the relevant stakeholders, including the target group, have been found to be more effective" (p. 158). Lee et al. (2013) attribute the positive effects found of the fotonovelas in their study directly to the involvement of the target audience in the development process. The authors state that "community-based participatory strategies […] enabled our fotonovelas to have high cultural relevance, and this might partially explain the effects observed in the study and positive feedback from our participants" (p. 700). As Koops van't Jagt et al. (2016) put it with reference to the development of the series of fotonovela strips in their study, "cocreation with the target group is believed to increase the possibility that readers or viewers perceive similarity and identify with characters" (p. 2).

Examples of participatory-type strategies employed by the different researchers in the reviewed studies included ascertaining the knowledge, attitudes, perceptions, behaviours, beliefs, feelings etc. of the target group with regards to the health issue at hand through e.g. conducting focus groups, interviews and surveys. Apart from gathering information from the target group themselves, some researchers also reviewed previous studies conducted in the target group to gain insight into perceptions of a specific health issue. Participants were also involved in providing input and ideas for the script and storyline or were cast as actors to portray the characters in the story in some of the studies. Familiar settings and locations, e.g. real clinics from the communities the participants lived in, were also used to create some of the fotonovela stories. In summary, involving the target audience in the development phase of a fotonovela seems to be advantageous for its development. Health promoters or researchers wishing to develop fotonovelas in future studies may therefore consider including this strategy as part of their approach.

Another strategy followed during the development phase of the fotonovela in many of the studies discussed in the literature review involved obtaining input from subject field experts. These experts ranged from health professionals (e.g. doctors, nurses, pharmacists) to professional scriptwriters and private companies specializing in fotonovela development. Seemingly, a wide range of expertise is required to develop a high quality health-related fotonovela. Including subject field

experts as part of fotonovela development may well prove problematic in some research environments though, for example in academia, where funding is often limited or lacking. Health promotors or researchers wishing to develop fotonovelas in the future may need to be cognisant of this fact, as the involvement of consultants or specialists on an ad hoc basis could increase the project budget significantly.

A far as could be established from the research presented in this literature review, only three studies employed a theoretical approach to help guide fotonovela development, namely, the studies by Cabassa et al. (2012), Chan et al. (2015), and Koops van't Jagt et al. (2016). Seemingly, there is a lack of awareness about the availability of theoretical guidance to help develop health messages among health campaign developers and promoters in the fotonovela field.

2.6.4 Research designs used to evaluate health-related fotonovelas

TABLE 2.3
Summary of the research designs used to evaluate health-related fotonovelas

Fotonovela Article	Health Issue	Research designs used to evaluate fotonovelas (where applicable)
Dick et al. (1996)	TB	• Fotonovela not formally evaluated
Cabrera et al. (2002)	TB	• The fotonovela was not evaluated
James et al. (2005)	STI's	• Experimental design Pre-test/Baseline; Post-test: 3 weeks, 6 weeks Two groups: Fotonovela group, Control group (no message)
Valle et al. (2006)	Dementia	• Exploratory design Post-test: Immediately, 3 weeks One group: Fotonovela group
Unger et al. (2009)	Diabetes	• Experimental design Pre-test; Post-test: Immediately One group: Fotonovela group
Cabassa et al. (2011)	Depression	• Descriptive research design using focus groups
Cabassa et al. (2012)	Depression	• The fotonovela was not evaluated
Unger et al. (2013)	Depression	• Experimental design: Randomized controlled trial Pre-test; Post-test: Immediately, 1 month Two groups: Fotonovela group, Text pamphlet group
Hernandez & Organista (2013)	Depression	• Experimental design: Pre-test; Post-test: Immediately Two groups: Fotonovela group, Control group (different message)

Lee et al. (2013)	Hepatitis B	• Experimental design: Randomized community trial with presentation, role play video, Q&A session, reading of fotonovela. Post-test only: 1 month
Boyte et al. (2014)	HPV	• Experimental design Pre-test; Post-test: Immediately One group: Fotonovela group
Duizer et al. (2014)	Diabetes	• Experimental design Post-test only: Immediately Three groups: Fotonovela group, Traditional pamphlet group, Control group
Chan et al. (2015)	HPV	• Experimental design Pre-test; Post-test: Immediately One group: Fotonovela group
Gallagher-Thompson et al. (2015)	Dementia	• Experimental design Pre-test/Baseline; Post-test: 4 months/6 months Two groups: Fotonovela group, Traditional brochure group
Koops van't Jagt et al. (2016)	Doctor-Patient Communication	• Fotonovela not formally evaluated
Koops van't Jagt et al. (2017)	Diabetes	• Experimental design Post-test only: Immediately Groups: Low literacy; High literacy Three conditions: Fotonovela group, Traditional pamphlet group, Control group

In many cases, as reported in the literature review presented in the current chapter, the studies showed encouraging outcomes i.e. positive effects for health-related fotonovelas. However, it seems the experimental design used in some of these studies (as summarized in Table 2.3) lacked the scientific rigour to draw definite conclusions for the effects found. For example, the studies by Lee et al. (2013) and Valle et al. (2006) neither used a strict pre- and post-test design, nor compared answers of participants of the fotonovela groups they tested with answers of participants in a traditional brochure group or a control group. Valle et al. mention not administering a pre-test prior to the introduction of their fotonovela as a shortcoming of their study (p.85). The studies by Boyte et al. (2014), Chan et al. (2015), and Unger et al. (2009) did use a pre- and post-test design, but

only included a fotonovela condition and not other message conditions (e.g. a traditional brochure group or a control group) to compare fotonovela responses with. Chan et al. (2015) point out the lack of a control group as a limitation of their study (p. 8). Moreover, the study by Cabassa et al. (2011) used a descriptive research design only, which makes it difficult to present convincing evidence for the effectiveness of fotonovelas in a health set-up. Cabassa et al. (2011) highlight this lack of an experimental research design to test causal relationships between exposure to the message and changes in attitudes and behaviours as a limitation of their study (p.845).

Six of the fotonovela studies discussed as part of the literature review compared the effects of a fotonovela to either a more traditional type health document and/or a control group receiving a different message or no message. Specifically, James et al. (2005) compared the effects of a fotonovela to a no message control group, Hernandez and Organista (2013) compared the effects of a fotonovela to a control group receiving a different message, while Gallagher-Thompson et al. (2015) and Unger et al. (2013) compared a fotonovela to a traditional type message. Duizer et al. (2014) compared the effects of reading a fotonovela with both a no message control group and group reading a traditional type message, while Koops van't Jagt et al. (2017) assigned participants from a low literacy and a high literacy group to one of three conditions, namely a fotonovela condition, a traditional brochure condition and a control condition.

Seen as a whole, researchers involved in future health-related fotonovela studies should make sure that experimental designs are created which make it possible to draw sound conclusions from the results found. Such designs could include e.g. setting up experiments where the effects of a fotonovela are compared to those effects of a more traditional text format as well as a control condition. The latter suggestion may also be important in the light of only two studies (Duizer et al., 2014; Koops van't Jagt et al., 2017) having compared fotonovelas to other more traditional formats while also including a control condition. Moreover, asking the seemingly obvious question of whether people prefer a fotonovela over a more traditional type health message may also help to develop a case for using or not using fotonovelas in a health context. This question was – perhaps rather unexpectedly – not posed in any of the studies identified in the literature review. Hence, including such a question around message preference may well be considered for inclusion in new fotonovela studies.

2.6.5 Explanations for the effects found of health-related fotonovelas

TABLE 2.4
Summary of the explanations for the effects found of health-related fotonovelas

Fotonovela Article	Health Issue	Explanations for the effects found of fotonovelas (where applicable and/or forthcoming)
Dick et al. (1996)	TB	• The fotonovela was not evaluated
Cabrera et al. (2002)	TB	• The fotonovela was not evaluated
James et al. (2005)	STI's	• No explanations given
Valle et al. (2006)	Dementia	• No explanations given
Unger et al. (2009)	Diabetes	• A lack of prior experience with diabetes • Engagement with the story and characters
Cabassa et al. (2011)	Depression	• Theoretical explanation (A conceptual model is proposed)
Cabassa et al. (2012)	Depression	• The fotonovela was not evaluated
Unger et al. (2013)	Depression	• No explanations given
Hernandez & Organista (2013)	Depression	• No explanations given

Lee et al. (2013)	Hepatitis B	• The cultural relevance of the fotonovela
Boyte et al. (2014)	HPV	• No explanations given
Duizer et al. (2014)	Diabetes	• Engagement with the narrative structure
Chan et al. (2015)	HPV	• Engagement with the characters
Gallagher-Thompson et al. (2015)	Dementia	• Participants could relate to the narrative format
Koops van't Jagt et al. (2016)	Doctor-Patient Communication	• The fotonovela was not evaluated
Koops van't Jagt et al. (2017)	Diabetes	• Engagement with the narrative structure

Unger et al. (2013) list possible explanations why fotonovelas may potentially be effective health communication tools in the introduction section of their article. They say fotonovelas (a) engage readers in the storyline making it more likely that they will internalize the message, (b) may be regarded as attractive, (c) often use role models to depict recommended behaviours, and (d) have greater 'reach' if readers pass them on in their social networks (p. 399). Although none of the fotonovela studies in the literature review explicitly suggests that the sharing and discussion of fotonovelas could possibly help explain why fotonovelas may be successful, Valle et al. (2006) found support for fotonovelas having greater impact when e.g. shared and discussed between participants. Along the same lines, studies by Cabassa et al. (2011), Gallagher-Thompson et al. (2015), Koops van't Jagt et al. (2017), and Unger et al. (2013) report participants showing intent and willingness to share and discuss fotonovelas within their social framework. As can be seen in

Table 2.4, studies by Duizer et al. (2014) and Koops van't Jagt et al. (2017) suggest that engagement with the narrative of fotonovelas may hold the key to help explain the effects found and employed a theoretical model (the EORM) to conduct empirical testing in this regard.

Apart from the beforementioned studies, possible explanations for the effects of fotonovelas appear to be lacking in most of the other studies analysed as part of the literature review (refer to Table 2.4). For example, no explanations were given for the effects found of the fotonovelas evaluated in studies by Boyte et al. (2014), James et al. (2005), and Valle et al. (2006). Hernandez and Organista (2013, p.233) allude to a possible explanation for the effects found of their fotonovela, namely the influence of cultural factors included in their culturally adapted narrative, but state that the restricted number of available theories about how such factors may influence health behaviour outcomes "limits our ability to more rigorously assess cultural narratives". Similarly, Chan et al. (2015, p.7) make reference to the importance of exploring which narrative elements are most influential for changing behaviour, as *identification* with the characters was thought to influence behavioural intentions in their study. Both Hernandez and Organista (2013) and Chan et al. (2015), however, do not provide any further clarification to back up their suggested explanations for the effects found.

In still other studies where explanations were put forward for the effects found, there seemed to be a lack of empirical evidence to back up the validity of those arguments. For instance, Cabassa et al. (2012) propose a conceptual model to explain possible effects found for the fotonovela (*Secret Feelings*) developed in their study. In this model, three communication process variables (i.e. *audience engagement*, *audience identification* and *interpersonal communication*) are hypothesized to mediate the effect of exposure to the fotonovela on message outcomes. In two related studies by Cabassa et al. (2011) and Unger et al. (2013) where *Secret Feelings* was evaluated, references are made to this conceptual model (or aspects thereof), but as far as could be determined, it was not systematically tested. Cabassa et al. (2011) comment that their study provided qualitative evidence only and that future studies should focus on testing the mediational relationship proposed in the conceptual model (p. 845). Although not explicitly referencing the conceptual model proposed by Cabassa et al. (2011) to explain possible effects found for *Secret Feelings*, Unger et al. (2013, p. 405) state that comparing only one fotonovela to one text pamphlet did not allow them

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to determine which elements of the fotonovela made it superior to the text pamphlet. Here, the authors list the story and characters as possible elements, which may explain why the fotonovela was found to be superior. The story and characters form part of the conceptual model proposed by Cabassa et al. (2012). Along the same lines, Unger et al. (2009) – in their fotonovela study about diabetes – suggest that the participants finding the characters and the story engaging and relevant (p. 150) could possibly explain the significant knowledge gains found in pre- vs. post-test. Yet, this possible explanation was not investigated further. In the same vein, Lee et al. (2013) state that the cultural relevance of their fotonovelas may partially explain the positive effects found, suggesting "readers might see themselves in the photonovel story and feel ownership" (p. 701). Again, though, empirical evidence to back up this possible explanation was not forthcoming. Lastly, Gallagher-Thompson et al. (2015) observe that the positive outcomes of the fotonovela may be explained by individuals relating to a narrated story, but do not explore this observation further. Rather, these authors suggest that future researchers should investigate the possible influence of specific narrative elements, e.g. the storyline and characters on message outcomes.

In summary, a need exists to come up with more explanations for the effects of fotonovelas as little information was forthcoming in the studies analysed, and to make sure such explanations are accompanied by convincing empirical evidence. Future studies could, for example, focus on using a theoretical base to help explain any possible effects – especially in the light of Duizer et al. (2014), Chan et al. (2015), and Koops van't Jagt et al. (2017) being the only studies as far as could be ascertained where a theoretical model was used for this purpose. Lastly, the phenomenon of sharing and discussing fotonovelas within social networks as a possible explanation as to why they may be impactful also warrants further investigation. Such investigations could, for example, try to determine how this practice could be utilized by researchers to make the health message even more successful.

2.7 Implications for the current study

2.7.1 Implications for fotonovela development

2.7.1.1 E-E strategy

The majority of health-based fotonovelas analysed in the current chapter were, in different degrees, culturally and linguistically adapted for their intended target audiences. For the most part, these targeted messages proved to be successful for their intended purposes.[18] To inform the development of a cultural-centric narrative for their fotonovela about dementia called *Secret Feelings*, Cabassa et al. (2012) employed an E-E strategy, which included a six-step production process. In this scenario, E-E strategy involved, inter alia, the development of a storyline with salient cultural themes and norms, and the inclusion of characters and other key features of the story (such as places, using Latino actors, and common expressions and words) which readers would be able to identify or form a personal connection with. See Section 2.5.7 and Figure 2.1 for more details about the six-step production process.
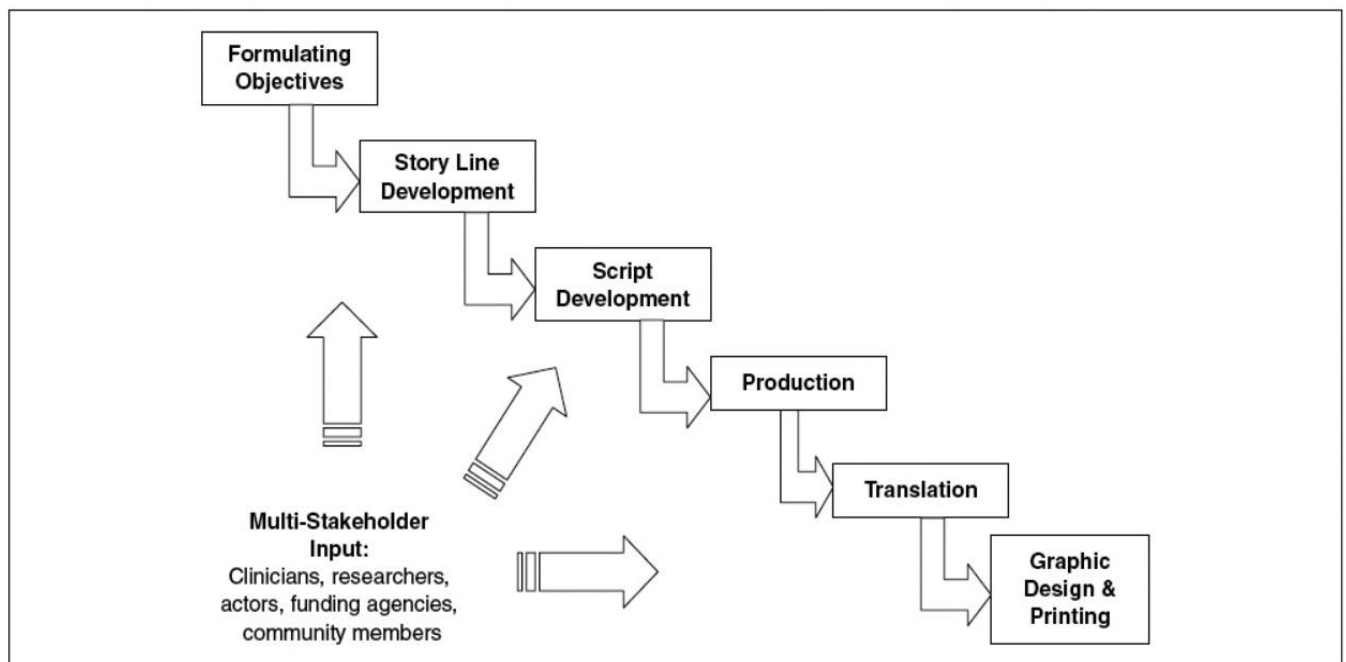
FIGURE 2.1. Fotonovela production process (Cabassa et al., 2012).

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[18] Although strong evidence exists that cultural-centric narratives are important for fotonovela effectiveness, narratives explicitly aimed at one cultural group may also be effective in other cultures (for empirical studies supporting this possibility, see Duizer et al., 2014; Koops van't Jagt et al., 2017).

As described earlier in this chapter, *Secret Feelings* was evaluated in follow-up studies by Cabassa et al. (2011), Hernandez and Organista (2013) and Unger et al. (2013). The overall findings from these three studies point to this fotonovela being effective in changing attitudes and reducing stigma related to dementia. In view of these examples of a successful application of the E-E strategy, its structured nature and its theoretical underpinning, this strategy and aspects of its production process were used to help guide the development of the fotonovela in the current study.[19] See Chapter 3 for more details.

2.7.1.2 Participatory approach

As mentioned earlier in this chapter, many previous fotonovela studies used a participatory approach to message development. Such an approach infers the inclusion of the target audience as part of the fotonovela development phase, which has proven instrumental in developing effective fotonovelas in previous studies as discussed in this chapter (also see Hinojosa et al., 2010; Hinojosa et al., 2011; Nimmon, 2007). The current study therefore also included inputs from the target audience to help cocreate the fotonovela (see Chapter 3 for more details).

2.7.1.3 Subject field experts

As highlighted earlier in this chapter, a wide range of expertise is required to develop high quality health-related fotonovelas. This often falls beyond the available skills set of the researcher(s) responsible for developing these messages. For the current study, the researcher also did not possess all the necessary expertise to develop the intended fotonovela about *tik* use so to ensure a professional product as outcome. Subject field experts were therefore consulted during the development and production of the fotonovela (see Chapter 3 for more details).

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[19] As mentioned earlier in this chapter, SCT (Bandura, 1977, 2004) and the Model of Culture-Centric Narratives (Larkey & Hecht, 2010) guided the application of the E-E strategy employed by Cabassa et al. (2012) to develop *Secret Feelings* (also see Hernandez & Organista, 2013).

2.7.2 Implications for fotonovela evaluation

2.7.2.1 Experimental design

As mentioned in Chapter 1 and discussed in more detail in this chapter, the literature review revealed that some of the health-based fotonovela studies lacked experimental rigour to draw definite conclusions for the effects found (Boyte et al., 2014; Cabassa et al., 2011; Chan et al., 2015; Lee et al., 2013; Unger et al., 2009; Valle et al., 2006). In addition, only a few studies proved to have compared the effects of fotonovelas to more traditional type formats (Duizer et al., 2014; Gallagher-Thompson et al., 2015; Koops van't Jagt et al., 2017; Unger et al., 2013). There was also a general lack of explanations as to why fotonovelas were effective (or not) in conveying health messages (Boyte et al., 2014; Chan et al., 2015; Hernandez & Organista, 2013; James et al., 2005; Valle et al., 2006), with a lack of empirical evidence to back up the validity of the arguments in cases where possible explanations were suggested for the effects found (Cabassa et al., 2011; Gallagher-Thompson et al., 2015; Unger et al., 2009; Unger et al., 2013). Based on these remarks, an experimental design was employed to evaluate the fotonovela developed for the current study, by comparing the effects found of the fotonovela to those effects of a more traditional text format, as well as of a control condition (see Chapter 4).

2.7.2.1 Health message preference

In the fotonovela studies identified as part of the literature search in the current chapter, determining whether people prefer a fotonovela over a more traditional type health message was seemingly never systematically collected, and therefore also formed part of the evaluation of the fotonovela developed for the current study as discussed in Chapter 4.

CHAPTER 3. FOTONOVELA DEVELOPMENT

3.1 Introduction

The aim of this chapter is to provide a detailed, step-by-step explanation of how the fotonovela for the current study was developed. The chapter starts with an overview of the fotonovela development process. The pre-production study conducted to help guide the plot and message content development of the draft version of the fotonovela is then presented. A detailed discussion of the development of the draft version of the fotonovela then ensues, focussing on (a) the rationale behind the health information selected for inclusion, (b) the fotonovela title and cover, (c) a breakdown of the plot, characters and scenes, and (d) how the health information and threat perceptions were conveyed. The details and findings of the post-production study conducted to evaluate the draft version of the fotonovela in order to make possible improvements or changes if/where necessary, are then unpacked. Lastly, changes and amendments made in an attempt to improve the draft version of the fotonovela are reported on.

3.2 Fotonovela development: Overview

3.2.1 Background

The researcher obtained generous funding through Subcommittee A of the Faculty of Economic and Management Sciences at Stellenbosch University to develop the fotonovela. Although subject field experts were consulted to help develop the fotonovela (see below), the researcher wrote the script, was producer/creator, and held executive control of the development process as project director. Moreover, the United Nations Educational, Scientific and Cultural Organization (2008) publication, *How to Create and Publish a Fotonovela*, was used as guide by the researcher to help develop the draft version of the script.

As mentioned in Chapter 2, the development of the fotonovela for the current study was guided by the E-E strategy used by Cabassa et al. (2012) to develop the fotonovela *Secret Feelings*.[20] This E-E strategy involved a six-step production process, which entailed (a) the formulation of objectives, (b) storyline development, (c) script development, (d) producing the fotonovela, (e) translating the fotonovela to Spanish, and (f) designing and printing the fotonovela, with input from multiple stakeholders during the different phases of this process. The production process followed to develop the fotonovela used in the current study is discussed next.

3.2.2 Formulation of objectives

The first objective that guided the development of the fotonovela was to increase the general knowledge levels related to *tik* of members of the target audience. This was done by determining target audience members' level of awareness of the health information related to *tik* (both the short-term and long-term effects). By doing so, possible *tik* health information they may be unfamiliar or less familiar with could be identified. The idea was for this information, if forthcoming, to be given special consideration for possible inclusion as part of the health information in the fotonovela. This was done as part of a pre-production study (see Section 3.3).

The second objective that guided the development of the fotonovela was to try and exploit the known positive effects that emotions can have on narrative persuasion (as discussed in Chapter 1). Specifically, the current study attempted to utilize the positive effects the emotion of *fear* can have on message persuasion by incorporating fear appeal characteristics as part of the fotonovela (see Sections 3.2.4 and 3.3). As far as could be ascertained in the review of the literature on fotonovelas in health communication in Chapter 2, the current study is the first study to pay explicit attention to the role of fear and other emotions included on a health issue.

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[20] Intervention Mapping (Bartholomew Eldrigde et al., 2016) was considered to guide fotonovela development. However, this method was primarily designed for developing complete health campaigns, while the current study aimed at designing a specific type of health message which may form part of a larger campaign.

3.2.3 Storyline development

As mentioned in Chapter 2, a cultural-centric narrative was developed to guide the story, plot, and character development of the fotonovela in the current study. The following narrative characteristics or message features were included as part of the plot and character depictions.[21]

The plot revolves around the protagonist who is depicted as an upstanding citizen who does well in his job, is involved in a committed relationship, and does not use *tik*. The protagonist is best friends with a *tik* user (the antagonist), who tries to persuade him to also use this substance. In the final act, the protagonist is persuaded by the antagonist to smoke *tik* and is negatively affected as a result. The reasoning behind the plot and protagonist depiction was as follows. Firstly, readers – especially those who had never used *tik* before – were expected to be more inclined to perceive themselves to be similar to or form a personal connection with a protagonist if initially presented as described, as opposed to e.g. being portrayed as a *tik* user or *tik* addict and/or someone who is jobless or in a volatile relationship. Secondly, the initial plotline and protagonist depiction were expected to heighten the interest in the story by creating questions in the mind of the reader, e.g. will the protagonist be influenced by his friend to use *tik* and, if so, what might happen? Will using *tik* affect the protagonist's work or personal life? The idea was thus to create tension by sequencing these unanswered questions up to the final act.

To increase cultural familiarity, a Coloured actor playing a male in his mid-twenties to early-thirties portrayed the protagonist.[22] Coloured actors also played other characters. The antagonist was portrayed as a Coloured male in his early-thirties. The antagonist was intentionally depicted as a casual *tik* user, well-groomed and shown as living in a middle to upper-class home with its own pub and entertainment area, seemingly enjoying a comfortable life. This was done so to increase the believability of the scenario in which the protagonist eventually decides to use *tik*

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[21] The narrative characteristics (both personal and cultural elements) incorporated as part of the story and characters in the fotonovela developed for the current study were largely based on related constructs contained in the Model of Culture-Centric Narratives (Larkey & Hecht, 2010). In general, there is a lack of theories guiding our understanding of how cultural elements may influence health behaviour change which "limits our ability to more rigorously assess cultural narratives" (Hernandez & Organista, 2013, p. 233; also see Hawkins, Kreuter, Resnicow, Fishbein, & Dijkstra, 2008). As a result, these authors argue, this avenue of research continues to be understudied. As far as could be ascertained, there is also a lack of research, which empirically tested the Model of Culture-Centric Narratives.

[22] These specific demographic features were chosen as it fitted the average *tik* user receiving treatment at drug centres in the Western Cape (Dada et al., 2015).

(discussed below), especially given his initial depiction as doing well in his job, being in a stable relationship, and someone who does not use *tik*. It was thought that readers may find it unconvincing if the protagonist, based on his character description, was e.g. friends with a regular *tik* user or addict of a lower socio-economic status. The second lead character was depicted as female, also Coloured, so that especially female readers from the target group would have a character they could identify with. This character was painted as an innocent victim of *tik*, with the idea being to convey the message of *tik* affecting not only the *tik* user, but also the family and friends of *tik* users. The rationale here was that some readers – especially those indirectly affected by *tik* in their lives – may as a result identify with her character and empathise with her situation. This character's story arc was also thought to increase the overall realism of the plot, as it is a well-known fact that drug users' families are often also negatively affected as a result. She was also depicted as being pregnant. The idea was to literally portray her vulnerability, so to further accentuate her 'innocent victim' characterization, as well as help increase her appeal to especially female readers.

The detailed plot describing the protagonist's story arc from being a non-user of *tik* to a user had to be believable and realistic in order for readers to possibly become or stay engaged in the character and story, especially given his initial depiction as an upstanding citizen. Therefore, possible explanations for the protagonist's decision to smoke *tik*, such as curiosity, rebellion, or enjoyment/recreation were expected to be perceived as unconvincing by readers. It was anticipated that a more plausible explanation behind the protagonist's decision to smoke *tik* would be if he was coaxed into doing so by a good friend in a familiar environment (i.e. the house of the antagonist), while it is made clear to the reader that the protagonist had previously resisted numerous attempts by this friend to sweet-talk him into smoking *tik*. The idea was thus to create a story which most readers would perceive as realistic. Thus, the detailed plot had to convincingly flesh out the circumstances leading up to this scenario playing out. Most of the scenes in the fotonovela were shot on location at a house in a typical Coloured community, in other words in a setting which should feel culturally familiar to the target audience. Events common to Coloured culture was also included to help create a culturally realistic storyline. For example, the main characters in the fotonovela were shown to support sport teams typically followed by the majority

of the target group, e.g. the Western Province and Blue Bulls rugby union teams and the English Premier League football clubs Manchester United and Chelsea.

3.2.4 Incorporating fear appeal characteristics

As mentioned, an objective of the current study was to utilize the positive effects the emotion of *fear* could have on message persuasion by attempting to incorporate fear appeal characteristics as part of the fotonovela.

The information in a fear appeal message typically comprises a threat component (e.g. the threat of HIV infection) and an efficacy component (e.g. effectively using condoms to prevent HIV infection) (Popova, 2012; Witte, 1998). For a fear appeal to work – according to the EPPM – it has to first induce strong perceptions of threat to motivate action. The Persuasive Health Message (PHM) framework by Witte et al. (2001) was used to guide the incorporation of fear appeal characteristics as part of the fotonovela. The PHM framework states that any effective health risk message should first convince people they are susceptible to a severe threat, and that they are able to adopt an easy and feasible response to effectively avert the threat (Witte et al., 2001, p. 54). For this to work, strong perceptions of threat must be evoked to motivate action, and even stronger perceptions of efficacy to motivate the right kind of action (Witte et al., 2001, p. 68). In summary, to increase the chances for a fear appeal to have a positive effect, strong perceptions of both threat and efficacy have to be evoked among receivers of the message.

To increase the chances of a high level of threat being perceived by potential readers of the fotonovela, an attempt was made to manipulate its message content and plot in different ways. Firstly, the protagonist's character depiction and character arc from being a non-user of *tik* to a user, were anticipated to help increase the chances of people perceiving a high level of threat resulting from the implicit messages it contained pertaining to susceptibility (i.e. *tik* can affect you even if you are a good, hard-working and responsible person) and severity (i.e. *tik* can lead to serious consequences even if you are not a regular user). Secondly, it was anticipated that identifying and including those health-related short-term and long-term effects associated with using *tik* perceived to be most threatening as part of the message content and/or plot, may increase the chances of readers perceiving high levels of threat. Apart from the health-related long-term

effects of *tik*, two long-term effects found to be commonly associated with *tik* use at inter-personal and community level in Cape Town were also considered here, namely (a) *domestic violence* and (b) *going to jail* because of *tik*-related activities (Watt et al., 2014). Determining which effects associated with using *tik* would potentially increase the chances of a high level of threat being perceived was conducted as part of a pre-production study (see Section 3.3).

The PHM framework recommends strong perceptions of efficacy in order to develop successful risk messages. Ruiter et al. (2014), in their fear appeal meta-analysis study, suggest that coping information aimed at increasing perceptions of response effectiveness is more important to promote actions in line with message recommendations than presenting threatening information intended to increase perceived risk and arouse fear. Although both the PHM framework and the study by Ruiter et al. suggest that perceived efficacy is important for achieving message success, it was decided not to try to manipulate the level of perceived efficacy in the fotonovela, for the following reasons.

The first reason why it was decided not to try to develop a high efficacy message was related to a recent meta-analysis of the persuasive effect of narrative characteristics in health-based narratives by De Graaf et al. (2016). In this study, which included 153 studies comparing different versions of health-based narratives, the authors conclude that in health-based narratives "an efficacy message does not seem to be a promising way to increase persuasiveness of the narrative" (p.100). The authors highlight three narrative-based studies. Morman (2000) reported on how an efficacy message with information on how to perform a testicular self-exam (compared to a no information message) resulted in higher intentions to perform the exam. However, the two other referenced studies did not find effects for efficacy information. Kim, Bigman, Leader, Lerman, and Capella (2010) report an efficacy message with information on how to quit smoking using quit aids (e.g. nicotine) was not significantly different in terms of influencing cessation intention when compared to a message about unaided quitting information ("cold turkey"). Knobloch-Westerwick and Sarge (2015) found that a weight loss message presenting slimming down as simple in the headline of a news article was not significantly different in terms of its effects on promoting weight loss behaviour compared to a slimming down message presented as tough in the headline of a news article.

The second reason why it was decided not to try to develop a high efficacy message related to (a) the nature of the recommended response, and (b) the unintended consequence a high efficacy message about this recommended response was expected to have. The recommended response to avert the threat of *tik* is evidently to not use *tik*, in order to prevent the possible effects and consequences related to this substance. Due to the bluntness of the recommended response, it was thought that a high efficacy message could increase the chances of the message being perceived as condescending and too overtly persuasive by audiences, instead of its intended purpose of creating high levels of perceived efficacy. For example, a high efficacy message could have been created by conveying the recommended response in an explicit way and as easy or simple to do. This could have been done in a scene set in a clinical scenario where a health worker conveys the recommended response to a patient by saying "It is easy to avoid the negative effects of *tik*. Just don't use this substance". Such a scenario was expected to rather create an impression of patronizing superiority and to make receivers feel that the message has a hidden agenda, as opposed to the intended consequence of increasing perceptions of efficacy. As Moyer-Gusé (2008, p. 420) remarks, "particularly challenging may be achieving the appropriate balance of entertainment and education in a program so that the education and/or health message is not so subtle that it is undetected by the audience but is also not overly 'preachy'".

In summary, as (a) manipulating efficacy in a narrative context seems to not add to the persuasiveness of the message, and (b) a high efficacy message involving *tik* may increase the chances of the message backfiring, it was decided not to develop an explicit high efficacy message for the fotonovela. Hence, the same efficacy information was still conveyed, but in a more implicit way through the plot and the actions of the protagonist.

3.2.5 Script and storyboard development

The script was developed in Afrikaans, the dominant language of this group. It was written in such a way that it would culturally resonate with the target audience. For example, the Afrikaans dialogue was heavily mixed with English words and was adapted to include colloquialisms and cultural cues e.g. typical greetings such as *Yes, yes, my broe!* (*Hello, my friend!*). An attempt was also made to write the dialogue between characters similar to how the majority of Coloured people would actually pronounce the words when talking to each other, thereby trying to 'capture' the

local accent in written format. In other words, the script was written in a way similar to how this group would converse in a typical informal conversation. For example, the phrase *Hoekom is jy laat?* (*Why are you late?*) was written as *Hoekô is djy laat?* The overall idea was thus to make the characters and story seem culturally familiar to the reader in order to establish a personal connection and ultimately promote engagement with the story and characters.

A part-time storyboard artist was recruited to develop a storyboard for the fotonovela. This person held a bachelor's degree in Creative Arts, specializing in cartoon design. The storyboard artist's main function was to bring "to life" the scenes, characters, poses and props accompanying the dialogue in the draft version of the script. In other words, this person helped to give a more professional structure (as well as provide artistic input) to the initial ideas proposed by the researcher of what the storyboard should look like. The storyboard served as template/guide for the production shoot of the fotonovela.

3.2.6 Production

The actors hired to star in the fotonovela worked for the educational theatre group from the Africa Centre for HIV and Aids Management at Stellenbosch University. They were all trained HIV and Aids peer educators. For the production shoot, the creative team consisted of the researcher, a photographer, an art director, and three consultants, namely, a former *tik* addict and two South African Police Services (SAPS) sergeants.

The photographer was a professional cinematographer. His experience included doing freelance work for, among others, the South African Broadcasting Corporation (SABC) and working on location for SABC TV actuality programmes such as *Pasella* and *Espresso*. A fotonovela shoot consists of taking photo stills of various scenes making up the plot, and is similar to shooting scenes for a movie or TV series. It was felt that a cinematographer should make a better creative contribution to the fotonovela shoot compared to a run of the mill photographer, as a person with a film background should have more experience in terms of providing input regarding photo angles, positioning and poses of characters, the use of props, etc. The cinematographer was also responsible for post-production.

Holding a master's degree in Drama, the art director hired for the shoot had close to 15 years of experience working as director, producer, actor and presenter in the entertainment industry in SA, on both stage and screen. She assisted with the casting of the actors as well as the planning of the shoot by helping to decide on locations and to select and source costumes and props for the actors. On the day of the shoot, she directed the different scenes and provided make-up for the actors.

The former *tik* addict helped to make sure that the props and techniques used to represent the use of *tik* in the fotonovela were a truthful representation of how this substance is consumed in a typical real-life South African scenario. The police sergeants assisted the two actors playing police officers in the fotonovela with their wardrobe, positioning, stance, and gun handling techniques.[23] They also supplied a police van, which was used as a prop.

3.2.7 Language adaptation

A freelance journalist working for the Afrikaans daily newspaper, *Die Son,* was asked to act as language advisor to linguistically adapt the dialogue and language of the fotonovela to appeal to the target audience. He was specifically chosen to act as language advisor on the project as the informal writing style employed in *Die Son* newspaper is similar to what was envisioned for the fotonovela. This informal writing style includes, for example, mixing Afrikaans with English words, using colloquial expressions, and spelling certain words the way many Coloured people would actually pronounce them when conversing with each other. He was also an Afrikaans-speaking, Coloured male who grew up in the rural area of the Western Cape and thus shared the same language, culture, norms and customs as the intended target audience. The advisor was tasked with adapting the language/dialogue of the script to the Cape dialect of Afrikaans spoken by many Coloured people (as opposed to 'standard' Afrikaans prescribed in a dictionary) by including linguistic intricacies specific to the target audience.

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[23] The role of the police officer characters in the plot and the reasoning behind the inclusion of these characters are discussed later in this chapter.

3.2.8 Graphic design and printing

A professional graphic designer was contracted to help with the layout of the pages, including the front and inside cover designs. The last step in the production process involved the printing of the fotonovela by Sun Media Stellenbosch. A small number of the fotonovelas were firstly printed and reviewed by members of the target audience (N=9) as part of a post-production study in order to make possible improvements or changes if/where necessary (see Section 3.5). The draft and final versions of the fotonovela were printed with a full colour front page and black and white inside pages. As far as could be ascertained, a full colour front page and black and white inside pages is the usual format in which fotonovelas in a South African context are printed.

3.3 Pre-production study

3.3.1 Introduction

A pre-production study was conducted among participants of the target audience using a formative evaluation approach. A formative evaluation approach entails the development and pre-testing of intervention materials and methods, allowing for a better understanding of the desired outcomes and essential components and contributing to interventions that are relevant and valuable to the target group (Nutbeam and Bauman, 2006). According to Witte et al. (2001), formative research helps to develop targeted, culturally appropriate, health risk messages that are effective. In the current study, the idea was thus to collect information that is relevant, useful and appropriate for the fotonovela. A formative evaluation approach was followed in the fotonovela studies by Cabrera et al. (2002), Koops van't Jagt et al. (2016), and Lee et al. (2013).

The first aim of this study was to determine participants' level of awareness of the health information related to *tik* (both the short-term and long-term effects). Any health information about *tik*, which participants might be unfamiliar or less familiar with, would then be given priority for possible inclusion as part of the health information in the fotonovela. Determining target audience members' level of awareness of health information related to *tik* issues in order to identify possible shortcomings is comparable to what has been done in previous health-related fotonovela research. In this research, KABB studies were conducted prior to developing health messages in order to identify possible shortcomings in the knowledge base pertaining to the health issue being

scrutinized (see Chapter 2). If forthcoming, these shortcomings would then be addressed as part of the new health message created.

The second aim of this study was to identify effects of *tik* use, which would potentially increase the chances of readers of the fotonovela perceiving high levels of threat. To do this, members of the target audience were asked to rank each of the short-term effects and long-term effects of *tik* use in terms of likelihood to be perceived as threatening by fellow members of the target group. Effects forthcoming as probable to evoke strong perceptions of threat among potential readers, would then be given priority for inclusion as part of the message content and plot of the fotonovela.

3.3.2 Method

The researcher, employed as a full-time lecturer and community interaction manager at the Africa Centre for HIV and Aids Management at Stellenbosch University at the time of the current study, mobilized a local community worker (with whom he had worked with on past community intervention projects) to act as field worker. She helped with the recruitment of participants and assisted with the collection of data. Participants were recruited in the rural town of Prince Alfred Hamlet in the Western Cape. Recruitment was done during health-related training interventions the community worker conducted as part of her daily work routine (these interventions did not involve training about *tik* or substance abuse). During these training interventions, the community worker invited those in attendance to take part in the study. Apart from using the training interventions as platform to recruit participants, the community worker also went from door-to-door to mobilize community members. Those participants who agreed to take part in the pre-production study completed a questionnaire.

3.3.2.1 Participants

TABLE 3.1
Gender of participants in the pre-production study

	Gender		
	Male	Female	
Total % (Count)	18.2 (6)	81.8 (27)	100 (33)

As can be seen in Table 3.1, the majority of participants who took part in the study were female (n = 27).

TABLE 3.2
Gender distribution over age groups of participants in the pre-production study

Gender	Age Group			
	≤19 % (Count)	20 – 34 % (Count)	≥35 % (Count)	Total % (Count)
Male	33.3 (2)	33.3 (2)	33.3 (2)	100 (6)
Female	37.0 (10)	37.0 (10)	26.0 (7)	100 (27)
Total % (Count)	36.4 (12)	36.4 (12)	27.3 (9)	100 (33)

As Table 3.2 shows, the pre-production study had a relatively even distribution of males and females over the different age groups. Although not officially recorded as part of the demographic information, all participants were Coloured.

3.3.2.2 Materials

The first part of the questionnaire consisted of a set of questions ascertaining the level of awareness of the health-based short-term and long-term effects of *tik* among the target group. The second part of the questionnaire asked participants to rank the perceived level of threat they thought members of the target audience would associate with these short-term and long-term effects of *tik*. Two long-term effects associated with *tik* use at inter-personal and community level, i.e. *domestic violence* and *going to jail*, were also included in the second part of the questionnaire. *Domestic violence* and *going to jail* were not considered in the first part of the questionnaire due to these effects being commonly associated with *tik* use. All the questions were presented in Afrikaans using simple, plain and easily understandable words and sentences.

3.3.2.3 Measures

Questions about the level of awareness of the health-based short-term and long-term effects of *tik* were anchored in a 2-point scale (1 = *I know*, 2 = *I didn't know*). The health-based short-term and long-term effects were sourced from the brochure *Tik – What are the Facts?* (see Addendum E for this brochure). The second part of the questionnaire asked participants to rank the health-based short-term and long-term effects, and the long-term effects associated with *tik* use at inter-personal and community level in terms of likelihood that people would perceive these effects of *tik* as threatening. These questions were anchored in a 3-point scale (1 = *big chance*, 2 = *small chance*, 3 = *no chance*).

3.3.2.4 Procedure

The community worker explained to participants what the study entailed, after which their informed consent was obtained. Participants were then allocated 15 minutes to complete the questionnaire. The community worker waited while participants filled out the questionnaire and collected it immediately afterwards.

3.3.2.5 Analysis

Descriptive statistics (frequencies, specifically the mode statistic) were used to analyse the results.

3.3.3 Results

TABLE 3.3
The level of awareness of the short-term effects of *tik*

Do you know about the following short-term effects of *tik*?	I didn't know about it Percentage (%)
Extreme tiredness	48.5%
Loss of appetite	43.8%
Anxiety/Nervousness	36.4%
False confidence to do dangerous or irresponsible acts	30.3%
Irritability	28.1%
Violent behaviour	27.3%
Affecting the senses (e.g. big eyes, dry mouth)	24.2%
Argumentative behaviour	24.2%
Rapid Speech	21.2%
Aggressive behaviour	21.2%
Wakefulness/alertness	12.1%
Jerky movements/fast reflexes	12.1%

As Table 3.3 shows, the short-term effects *extreme tiredness* and *loss of appetite* were found to be unknown to more than 40% of participants.

TABLE 3.4
The level of awareness of the long-term effects of *tik*

Do you know about the following long-term effects of *tik*?	I didn't know about it Percentage (%)
Smoking *tik* makes you feel like there are insects crawling under your skin (delusions)	51.5%
Visible bodily signs (e.g. tooth decay, sores in the mouth, and lesions on the skin)	45.5%
Suicidal thoughts	33.3%
Little or no pleasure derived from former enjoyable activities (anhedonia)	33.3%
Thinking other people want to do something bad to you (paranoia)	30.3%
Seeing things that are not there (delusions)	27.3%
Weight loss	24.2%
Affecting organs (e.g. brain damage)	21.2%
Marked general physical deterioration/makes you look old	12.1%
Sleep disturbances	12.1%

As Table 3.4 shows, the long-term effects *(the sensation of) insects crawling under your skin* (delusions) and *visible bodily signs* (described as *tooth decay, sores in the mouth, and lesions on the skin)* were found to be unknown to more than 40% of participants.

TABLE 3.5

The short-term effects of *tik* ranked in terms of likelihood to be perceived as threatening by fellow members of the target group

What is the likelihood that people would perceive the following short-term effects of *tik* as threatening?	Percentage (%)		
	Big Chance	Small Chance	No Chance
Affecting the senses (e.g. big eyes, dry mouth)	57.6%	21.2%	21.2%
Anxiety/Nervousness	54.5%	24.2%	21.2%
Aggressive behaviour	54.5%	24.2%	21.2%
Irritability	51.5%	33.3%	15.2%
Violent behaviour	51.5%	30.3%	15.2%
Jerky movements/fast reflexes	51.5%	30.3%	15.2%
Wakefulness/alertness	51.5%	30.3%	15.2%
Argumentative behaviour	48.5%	30.3%	21.2%
False confidence to do dangerous or irresponsible acts	42.4%	30.3%	24.2%
Rapid Speech	39.4%	30.3%	27.3%
Loss of appetite	33.3%	27.3%	39.4%

Table 3.5 shows seven possible short-term effects associated with *tik* that at least 50% or more of respondents thought had a big chance to be perceived as threatening by fellow members of the target audience.

TABLE 3.6

The long-term effects of *tik* ranked in terms of likelihood to be perceived as threatening by fellow members of the target group

What is the likelihood that people would perceive the following long-term effects of *tik* as threatening?	Percentage (%)		
	Big Chance	Small Chance	No Chance
Going to jail	60.6%	18.2%	21.2%
Thinking other people want to do something bad to you (paranoia)	60.6%	18.2%	21.2%
Seeing things that are not there (delusions)	57.6%	12.1%	30.3%
Marked general physical deterioration/makes you look old	54.5%	18.2%	24.2%
Domestic violence	54.5%	15.2%	30.3%
Sleep disturbances	54.5%	15.2%	28.1%
Affecting organs (e.g. brain damage)	51.5%	30.3%	15.2%
Weight loss	45.5%	24.2%	30.3%
Extreme tiredness	42.4%	33.3%	24.2%
Anhedonia (i.e. the little or no pleasure derived from former enjoyable activities)	42.4%	30.3%	27.3%
Smoking *tik* makes you feel like there are insects crawling under your skin (delusions)	39.4%	30.3%	27.3%
Suicidal thoughts	36.6%	33.3%	30.3%
Visible bodily signs (e.g. tooth decay, sores in the mouth, lesions on the skin)	36.4%	36.4%	27.3%

Table 3.6 shows seven possible long-term effects associated with *tik* that at least 50% or more of respondents thought had a big chance to be perceived as threatening by fellow members of the target audience. Two of these seven effects, namely *going to jail* and *thinking other people want*

to do something bad to you, were perceived by more than 60% of the participants as having a big chance of being perceived as threatening by members of the target group. At the same time relatively small percentages of respondents believed that both these effects *going to jail* and *thinking other people want to do something bad to you* had no chance at all of being perceived as threatening (21.2% of respondents in both cases).

3.3.4 Discussion

The study presented here firstly identified health information related to *tik* which participants may be unfamiliar or less familiar with. Secondly, possible effects of *tik* use that could help to increase the chances of high levels of threat being perceived by readers were identified.

The majority of the participants in the pre-production study were female (81.8%). It was not expected that participants views on the issues posed in the questionnaire would be uninformed or differ substantially between the genders, even though the average *tik* user receiving treatment at drug centres in the Western Cape is Coloured, male, and in his late twenties (Dada et al., 2015). As mentioned earlier, *tik* is not just a drug addiction problem, but also a major social problem among the Coloured community in the target area, affecting males and females alike.

Results showed that most participants were well aware of the short- and long-term effects of *tik* use, as only *extreme tiredness*, *loss of appetite, (the sensation of) insects crawling under your skin*, and *visible bodily signs* were found to be the realtively unknown to a big number of participants (>40%). These four effects were given priority for possible inclusion as part of the draft version of the fotonovela. Moreover, seven short-term effects and seven long-term effects associated with *tik* thought by at least 50% or more of participants to have a big chance of being perceived as threatening by fellow members of the target group were also given priority for possible inclusion as part of the draft version of the fotonovela.

The long-term effects of *tik*, i.e. *going to jail* and *thinking other people want to do something bad to you*, were identified by majorities of participants as having a big chance to increase threat perceptions among the target audience. *Going to jail* and *thinking other people want to do something bad to you* may then be considered likely effects to evoke strong perceptions of threat.

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Going to jail, in particular, was felt to have potential in this regard, as it could be conveyed in a visually explicit way in a fotonovela by e.g. having a fear-provoking scene in a jail cell.[24] Perhaps surprisingly, findings from the pre-production study suggest that the long-term effect *visible bodily signs e.g. lesions on the skin* did not have a big chance of being perceived as threatening by fellow members of the target group, with only 36.4% of participants thinking so. Seen as a whole, the pre-production study provided a blueprint for the most probable as well as the least probable effects to influence the perceived level of threat. This information was next used to offer direction for the development of the draft version of the fotonovela.

3.4 Development of the draft version of the fotonovela

3.4.1 Rationale behind the health information included

The health information about *tik* considered for inclusion in the draft version of the fotonovela consisted of its short-term and long-term effects as well as efficacy information related to this substance.

3.4.1.1 The short-term and long-term effects of *tik*

As the plot revolved around the protagonist being a non-user of *tik* who is persuaded to smoke this substance, the health information included focussed on the short-term effects of *tik* as experienced first-hand by this character. The rationale behind deciding which of the short-term effects to include was as follows. Firstly, the short-term effects of *tik* that participants may be unfamiliar with were given priority for inclusion. Secondly, as the study wished to include fear appeal characteristics as part of the fotonovela (as described earlier), the short-term effects most likely to increase the chances of high levels of threat being perceived by readers were also given priority for inclusion. The findings from pre-production study served as guidance here.

The two short-term effects of *tik* identified in the pre-production study as being unfamiliar to more than 40% of participants were given priority for possible inclusion as part of the health information conveyed in the fotonovela. These two short-term effects were *extreme tiredness* and *loss of*

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[24] *Going to jail* was included as part of the last scene in the fotonovela developed for the current study. See Section 3.5 of this chapter.

appetite. *Extreme tiredness* was included as part of the plot. *Loss of appetite* was excluded as it was felt to be too difficult to convincingly convey in a visual format. In order to increase the chances of strong perceptions of threat being evoked, the short-term effects of *tik* indicated by at least 50% or more of participants to have a big chance of being perceived as threatening by fellow members of the target group were given priority for inclusion as part of the health information in the plot. All of these short-term effects were included in the plot, namely *tik affecting the senses (dry mouth, big eyes), anxiety/nervousness, aggressive behaviour, irritability, violent behaviour, jerky movements/fast reflexes,* and *wakefulness/alertness.* Two other short-term effects, *argumentative behaviour* and *false confidence to do dangerous or irresponsible acts*, were also included. In summary, with the exception of *rapid speech* and *loss of appetite*, all short-term effects associated with *tik* were included in the draft version of the fotonovela.

With the draft version of the fotonovela focussing on depicting the short-term effects of *tik* use as experienced by the protagonist, ways were sought to also try to convey the long-term effects of *tik* as part of the story. This was deemed necessary as respondents indicated that certain long-term effects, especially *thinking other people want to do something bad to you* (paranoia), had a big chance of being perceived as a threat by members of the target group and could thus possibly help to increase the level of perceived threat. Possible ways to do this was by introducing a time skip in order to allow the protagonist to then show signs of the long-term effects of *tik* (assuming this character would then be depicted as using *tik* over a long period). Another option was to include a *tik* addict as part of the cast of characters. However, depicting the long-term effects of *tik* as experienced by a character presented certain challenges.

The first challenge was that some long-term effects such as damage to organs, paranoia, delusions, physical deterioration, anhedonia, weight loss and sleep disturbances are less observable and difficult to convincingly convey in a visual format such as a fotonovela. Secondly, to depict e.g. the more observable long-term physical effects of *tik* (such as tooth decay, sores in the mouth and lesions on the skin) in a manner which would be perceived as believable and realistic by readers was also considered to be problematic given the budget constraints for developing the fotonovela. To do so would require very specific expertise (e.g. professional make-up artists, special effects etc.) A further possible way to portray the long-term effects of *tik* was to include this information

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as part of the dialogue between characters, for example in a scene set in a clinical scenario where a health worker is conveying these facts to the protagonist. However, it was felt that conveying health information in this manner would be too 'obvious'. As mentioned earlier, a level of subtlety is necessary when including a health education message in a narrative, be it in a fotonovela or any other format (Moyer-Gusé, 2008, p. 420). Another option still was to include information about the long-term effects of *tik* as part of a Q&A section at the back of the fotonovela (see e.g. Boyte et al., 2014; Cabassa et al., 2012; Chan et al. 2015; Unger et al., 2009; Unger et al., 2013). However, as one of the objectives of the overall study was to determine to what extent the narrative format of the fotonovela can possibly help to explain the effects found, the inclusion of such a section was not considered, due to its possible influence on the effect(s) the narrative may have. In a nutshell, given the difficulties to portray the long-term effects of *tik*, the draft version of the fotonovela only focussed on the short-term effects as experienced by the protagonist.

3.4.1.2 Efficacy information about *tik*

The recommended response to avert the threat of *tik* is to not use *tik* in order to prevent the possible effects related to this substance. Despite the PHM framework suggesting that such information should be conveyed explicitly (Witte et al., 2001, p. 7), this information was implicitly conveyed through the plot and the actions of the protagonist for the reasons explained earlier (refer to Section 3.2.2 of this chapter). It entailed two scenes where the protagonist abruptly tells the antagonist, who tries to persuade him to also use *tik*, that he does not wish to smoke this substance (although eventually he is influenced to do so).

3.4.2 Title and cover

FIGURE 3.1. The cover of the fotonovela.

See Figure 3.1 for the fotonovela title and cover. The title of the fotonovela, *Spyt kom te laat*, was specifically chosen as (a) it is a well-known Afrikaans saying, and (b) its meaning automatically creates questions in the mind of the reader. Literally translated, *Spyt kom te laat* means 'Regret comes too late'. It was expected that potential readers may be curious as to what its meaning implied. Specifically, readers may wonder who is regretting what and under which circumstances – and by doing so the title might motivate them to wish to read the fotonovela. The photo used on the front cover served the same purpose. In this picture, two of the main characters, Ricardo and Anja, can be seen looking surprised, accompanied by the commentary "Anja en Ricardo kan nie

glo wat hulle sien nie…" (Anja and Ricardo cannot believe what they are seeing…). This picture was chosen for its potential to make readers curious as to what Ricardo and Anja are looking at/surprised about, thereby enticing them to read the fotonovela.

3.4.3 Plot synopsis

Ricardo has known his best friend, Percy, from their school days together. Percy likes to smoke *tik* over weekends. Anja, Ricardo's wife, knows about Percy's *tik*-smoking habits and disapproves of their friendship. One night Ricardo visits Percy to watch sport, a night that would change their lives forever.

3.4.4 Character breakdown

3.4.4.1 Ricardo (protagonist)

Ricardo is an upstanding, hard-working Coloured male in his mid-twenties to early-thirties who has a responsible job, is happily married to Anja, and does not use *tik*.

3.4.4.2 Anja (second main character)

Anja is Ricardo's wife. Anja is a Coloured female in her middle to late 20's who works as a nurse, and is pregnant with Ricardo's baby boy.

3.4.4.3 Percy (antagonist)

Percy is Ricardo's best friend. He is Ricardo's peer and likes to smoke *tik* over weekends.

3.4.4.4 Mr Samuels (supporting character)

Mr Samuels is Ricardo's boss. He helped to set up Ricardo's character as a hard-working and responsible person.

3.4.4.5 The police (supporting characters)

The two police officers mainly served as a plot device, i.e. to move the plot forward.

3.4.5 Scene breakdown

3.4.5.1 Scene 1 (The workplace scene)
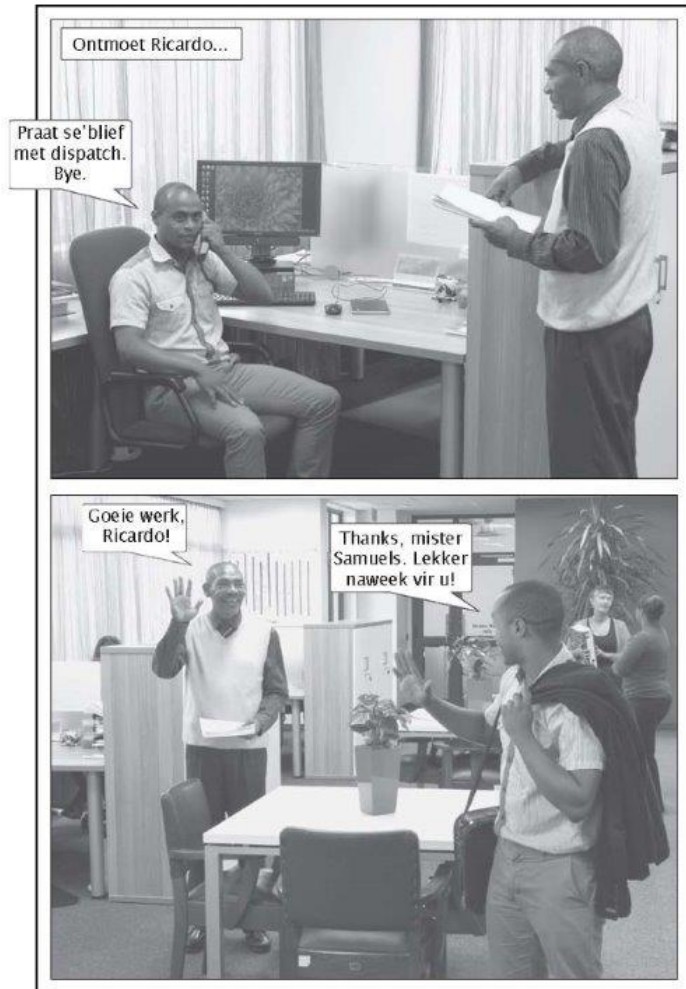
FIGURE 3.2. The draft (and final) version of Scene 1 (The workplace scene).

In Scene 1 (The workplace scene, Figure 3.2), the reader sees Ricardo leaving work. His boss, Mr Samuels, thanks him for the good work he had done that week.

3.4.5.2 Scene 2 (The package scene)
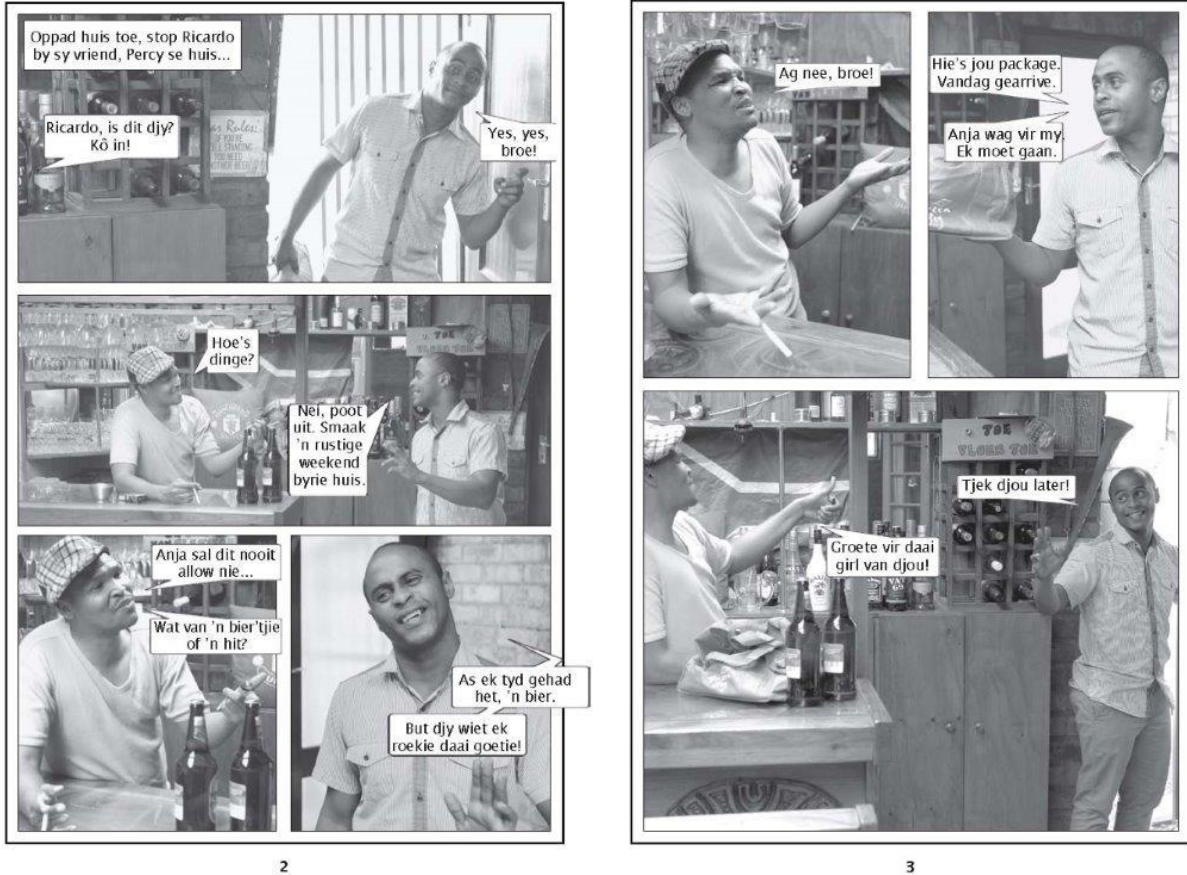
FIGURE 3.3. The draft (and final) version of Scene 2 (The package scene).

In Scene 2 (The package scene, Figure 3.3), Ricardo drops off a package at Percy's house before going home. Percy – sitting behind his homemade bar – welcomes Ricardo inside and offers him a beer and some *tik*. Ricardo responds by saying if he had time he would drink a beer, but strongly declines the invitation to smoke *tik*. Ricardo then leaves to go home.

3.4.5.3 Scene 3 (The kitchen scene)

FIGURE 3.4. The draft (and final) version of Scene 3 (The kitchen scene).

In Scene 3 (The kitchen scene, Figure 3.4), the reader sees Ricardo coming home to Anja after dropping off the package at Percy's house. Anja is preparing dinner in the kitchen. After Ricardo greets Anja, he apologizes for being late and tells her he first had to drop off a package at Percy's house. Anja is distraught, saying she cannot believe they are still friends. She mentions that she has heard Percy is involved with *tik*. She warns Ricardo that being friends with Percy may get him into trouble. Ricardo shrugs off this suggestion, saying it will never happen, as he is a responsible person. Anja, seemingly not convinced, replies by saying she hopes it will be so. Ricardo then changes the subject, preferring to rather talk about Anja's impending pregnancy. The reader learns Anja is expecting a baby boy.

3.4.5.4 Scene 4 (The soccer scene)

FIGURE 3.5. The draft (and final) version of Scene 4 (The soccer scene).

In Scene 4 (The soccer scene, Figure 3.5), Ricardo visits Percy's house the next Saturday to watch soccer. They are watching the game while seated behind Percy's bar. Percy is a big Manchester United fan, while Ricardo supports Chelsea. While watching soccer, Percy again tries to entice Ricardo to use *tik*. Ricardo is agitated at Percy for again trying to tempt him to smoke *tik* and declines the invitation. Percy tells Ricardo he will one day succeed in convincing him, to which Ricardo sarcastically replies that day would only come when they support the same team (implying it will never happen).

3.4.5.5 Scene 5 (The dinner scene)
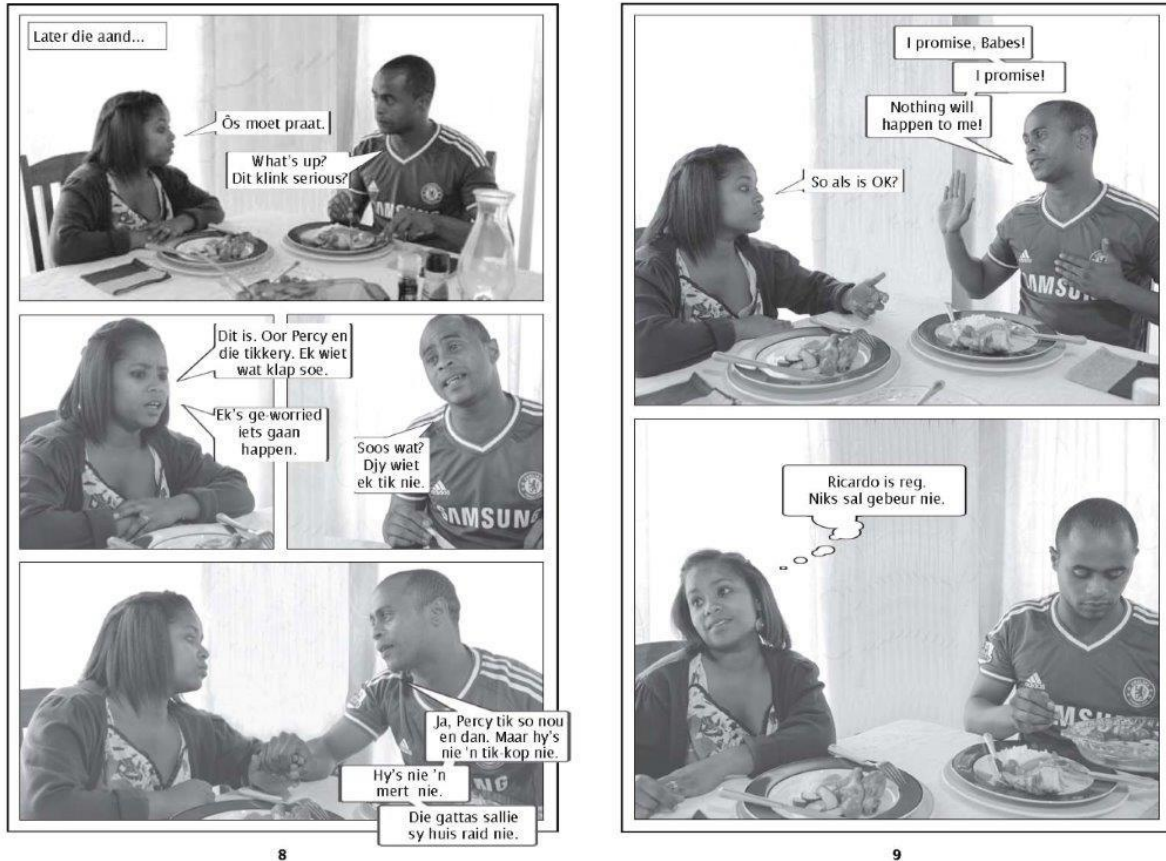
FIGURE 3.6.   The draft version of Scene 5 (The dinner scene).

In Scene 5 (The dinner scene, Figure 3.6), Ricardo had returned home later that evening after watching the soccer match at Percy's house. Anja and Ricardo are having dinner. Anja again raises her concerns about Ricardo's friendship with Percy whose *tik* habit she feels might rub off on him (Ricardo). In response, Ricardo plays down these concerns. He assures Anja that he does not use *tik* and Percy is only a casual *tik* user and does not deal in drugs, so the police had no reason to raid his house. Ricardo then promises Anja that he will not smoke *tik* and nothing will happen to him. The scene ends with Anja thinking to herself Ricardo is right and nothing will happen to him.

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3.4.5.6 Scene 6 (The sports bet scene)
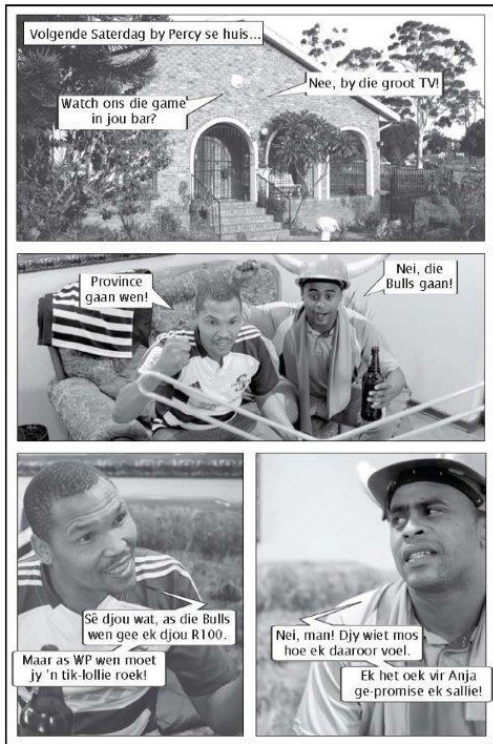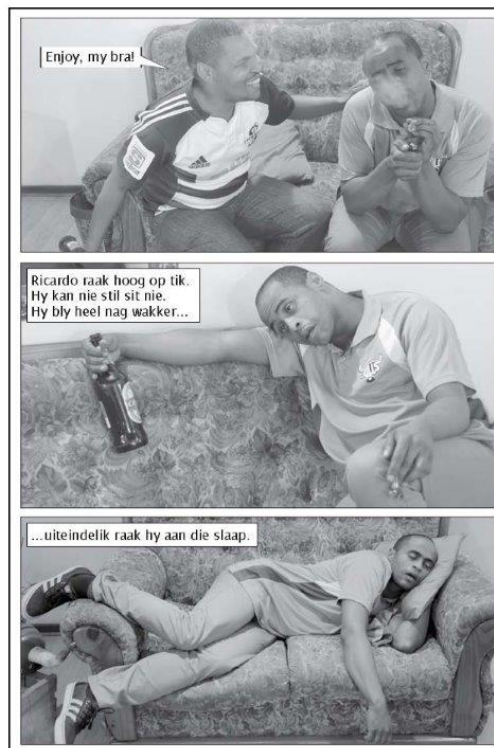
FIGURE 3.7. The draft version of Scene 6 (The sports bet scene).

In Scene 6 (The sports bet scene, Figure 3.7) it is one week later, and Percy and Ricardo are about to watch a rugby game between Western Province and the Blue Bulls in Percy's TV room. They are at loggerheads as to whose team will win the game. Percy is a Western Province fan and Ricardo a Blue Bulls fan. Percy then coaxes Ricardo into a bet: Ricardo has to smoke *tik* if his team (The Blue Bulls) loses the match, while Percy will have to pay Ricardo R100 if Western Province loses the match. At first, Ricardo is reluctant to take the bet, saying Percy knows how he feels about using *tik* and that he had promised Anja he would never smoke *tik.* Percy quips Ricardo is only making excuses and questions why he does not have any confidence in his team. Ricardo responds by saying he has confidence in his team, but that it is dangerous to experiment (with *tik*). Yet, Ricardo tells Percy he cannot resist a bet and he believes his team will win. Ricardo accepts the bet. When the Blue Bulls subsequently lose to Western Province, Ricardo has to honour the bet. Thinking that nothing will happen to him if he only smokes *tik* once, Ricardo decides to smoke *tik*. Ricardo becomes high on *tik* and eventually passes out.

3.4.5.7 Scene 7 (The waking up scene)

FIGURE 3.8. The draft version of Scene 7 (The waking up scene).

In Scene 7 (The waking up scene, Figure 3.8), the reader sees Ricardo waking up the next morning, still at Percy's house. This scene depicts Ricardo thinking to himself. He is not sure what happened the previous night and is experiencing the short-term effects of smoking *tik*. At first, he cannot remember where he is. He then recalls he smoked *tik* the previous night at Percy's house and never went home. He is worried about what Anja and his work would think if they knew what he had done. Percy is nowhere to be found. While still trying to make sense of the situation, Ricardo hears the sound of a slamming door. He thinks it is Percy at the door.

3.4.5.8 Scene 8 (The beer bottle scene)
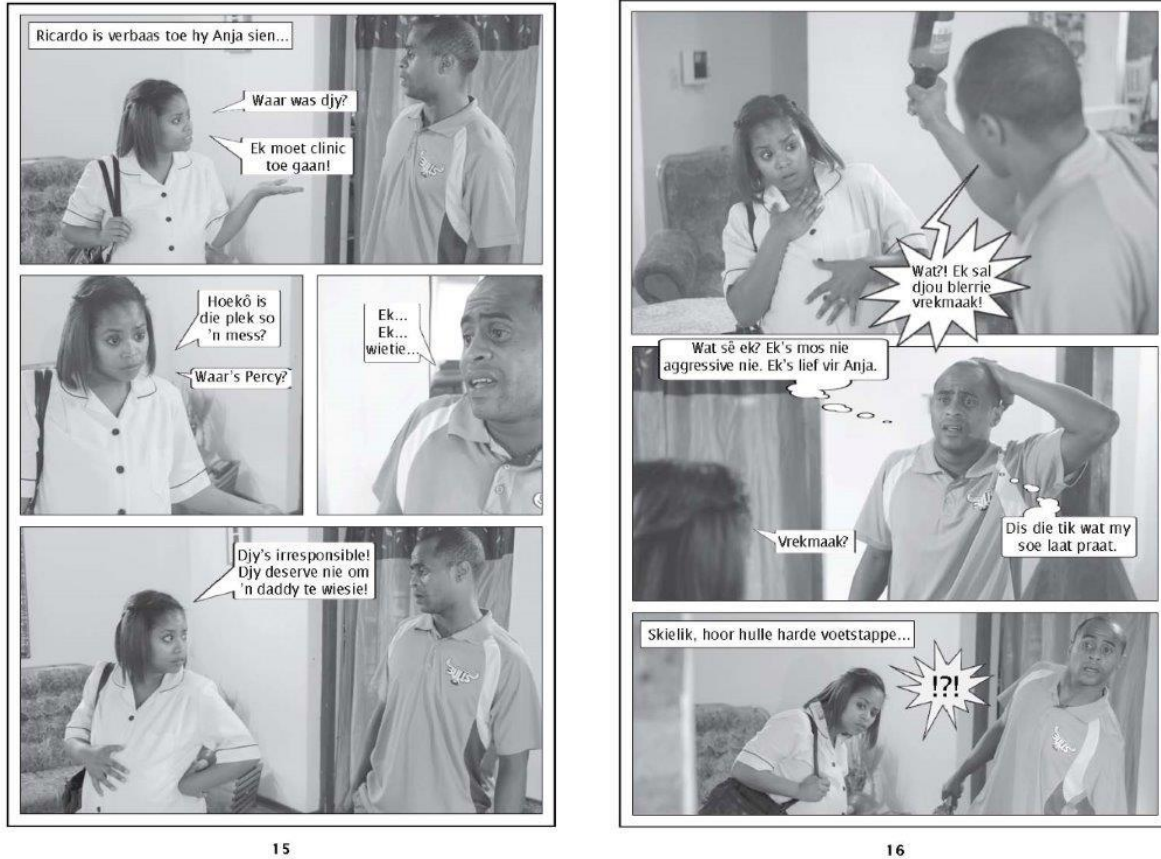
FIGURE 3.9. The draft version of Scene 8 (The beer bottle scene).

In Scene 8 (The beer bottle scene, Figure 3.9), Ricardo is surprised to see it is in fact Anja who is looking for him. Anja, clearly upset, confronts Ricardo about where he was. Ricardo was supposed to take her to the clinic that morning. She wants to know why the house is in such a mess and where Percy is. Ricardo does not know what to say. Clearly upset, Anja tells Ricardo he is not worthy to be the father of her child. Ricardo, still confused about the happenings of the previous night and experiencing the side effects of having smoked *tik*, then loses his temper and threatens to hurt Anja with a beer bottle. Ricardo immediately regrets his actions, thinking to himself it must be the effect of the *tik* that made him do it. Just then, they hear footsteps at the door. Anja and Ricardo cannot believe what they see.

3.4.5.9 Scene 9 (The arrest scene)

FIGURE 3.10. The draft version of Scene 9 (The arrest scene).

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In Scene 9 (The arrest scene, Figure 3.10), to the major surprise of both Ricardo and Anja, it is the police who arrive to conduct a *tik* raid of Percy's house. One of the police officers asks Percy where the *tik* is hidden, with Ricardo looking startled while uttering there is no *tik* in the house. After searching the house, the two police officers find *tik* hidden under the couch in Percy's living room. The police officers then arrest both Ricardo and Anja for suspicion of *tik* possession. Ricardo vehemently denies that the *tik* supply is his, and tries to convince the police it is Percy's *tik*. Anja reacts by saying they are respectable members of the community with decent jobs (implying that they cannot be guilty). The police are adamant, saying the facts do not lie: they are there and *tik* was found in the house. One of the policemen then confronts Ricardo about his demeanour and implies he has smoked *tik* as he seems to be displaying signature physical attributes thereof (i.e. his eyes look big and he seems fidgety).

3.4.5.10 Scene 10 (The confession scene)
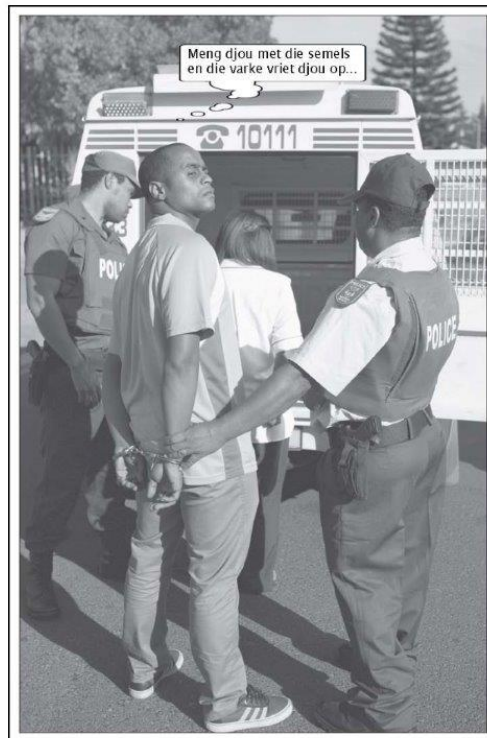
FIGURE 3.11. The draft version of Scene 10 (The confession scene).

In Scene 10 (The confession scene, Figure 3.11), Ricardo confesses he smoked *tik* the previous evening, and that it was all part of a stupid bet he had to honour. He insists it was the one and only time he has used this substance. Anja reacts by saying she cannot believe it, as Ricardo had made her a promise. Before Anja can complete her sentence, however, as to what the promise was about, one of the police officers interrupts her by sarcastically asking her whether Ricardo had promised to her that nothing would happen to him (Ricardo). Ricardo pleads for forgiveness from Anja. Anja bursts out crying, saying she is pregnant and worried that something may happen to her baby if she has to go to prison. She puts all the blame for the turn of events on Ricardo. Ricardo stutters, as he does not know how to respond. Ricardo and Anja are then loaded into a police van, presumably to be taken to jail.

3.4.6 How the health information was conveyed

The health information related to the short-term effects of *tik* was incorporated into the plot of the draft version of the fotonovela as follows:

- *Wakefulness/alertness:* After Percy coaxes Ricardo into smoking *tik* in the draft version of Scene 6 (the sports bet scene, Figure 3.7), the reader sees a shot of Ricardo becoming high on *tik*. It is mentioned in the commentary accompanying this shot that Ricardo could not sit still and stayed awake all night.

- *Tik affecting the senses (dry mouth)*, *extreme tiredness, anxiety and irritability*: These short-term effects were incorporated in the draft version of Scene 7 (the waking up scene, Figure 3.8) where Ricardo wakes up after smoking *tik* the previous evening. Here, these effects of *tik* are conveyed to the reader as part of a thinking sequence where Ricardo is trying to make sense of the effects he is experiencing after smoking *tik* the previous night.

- *Aggressive/violent behaviour:* In the draft version of Scene 8 (the beer bottle scene, Figure 3.9) after Anja confronts Ricardo for staying at Percy's house all night, Ricardo loses his temper and threatens Anja with a beer bottle. Here, the reader sees Ricardo thinking to himself that he loves Anja and that he is not an aggressive person. He blames the effects of using *tik* for influencing him to act in this way.

- *Tik affecting the senses (big eyes), jerky movements/fast reflexes:* After *tik* is found in the house, depicted in the draft version of Scene 9 (the arrest scene, Figure 3.10), Ricardo tries

to convince the police that it is Percy's *tik*. In response, the police then refer to Ricardo's suspicious demeanour, saying his physical appearance and actions seem to show the effects of *tik* use, i.e. his eyes appeared 'big' and he looked fidgety.

As mentioned, the efficacy information to avert the threat posed by *tik* in the draft version of the fotonovela was implicitly conveyed through the plot and the actions of the characters. The recommended response to avert the threat of *tik* is to not use *tik* in order to prevent the possible effects related to this substance. This information was conveyed through Ricardo's actions in the two different scenes, namely in the draft and final version of Scene 2 (the package scene, Figure 3.3) and in the draft and final version of Scene 4 (the soccer scene, Figure 3.5) where he declines the invitation from Percy to smoke *tik*.

3.4.7 How threat perceptions were emphasized

Apart from including specific short-term effects in the draft version of the fotonovela to help emphasize threat perceptions, the following aspects were also included for the same purpose.

Based on the results of the pre-production study, the long-term effect associated with using *tik*, i.e. *going to jail*, was considered as likely to evoke strong perceptions of threat. Depicting such a scenario in a visually explicit way was expected to boost the likelihood of *going to jail* evoking strong threat perceptions. Consequently, *going to jail* was built-in as part of the plot and was inferred in the last scene where the protagonist is arrested by the police and loaded into a police van – forming the climactic last shot of the story's plot. By ending the story rather bluntly without the proverbial happy ending, the idea was to emphasize threat perceptions pertaining to *tik*, that is, to make the reader realise that using *tik* can lead to serious situations with grim consequences.

The title of the fotonovela, "Spyt kom te laat", as depicted on its front cover (Figure 3.1), featured the colours red and black, which are often associated with the emotion of fear (Hupka, Zaleski, Otto, Reid, & Tarabrina, 1997). The unconventional font type *My Underwood* was used to depict the word "Spyt" in the title of the fotonovela and was specifically chosen as it was felt to have an "eerie" look and feel. "Spyt" appears in big, red capital letters on a black background with the rest

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of the title ("kom te laat)" underneath in a smaller, more conventional red font type (*BankGothic Md BT*). These colours and font type were thus chosen to also help emphasize perceptions of threat.

In the draft version of Scene 10 (the confession scene, Figure 3.11) where Ricardo confesses to smoking *tik*, Anja reacts by saying "Ricardo! Hoe kon djy? Djy het dan ge-promise…" (Ricardo! How could you? You promised…). However, before Anja can complete her sentence as to what this promise entailed, one of the policemen interrupts her by saying "...nothing will happen to me???" This remark was meant in a sarcastic tone as exactly the opposite was true – something did happen to Ricardo, i.e. he was arrested for possession of *tik*. It was also an ironic callback to Ricardo's earlier promise to Anja in the draft version of Scene 5 (the dinner scene, Figure 3.6) about never using *tik*, where he used the exact same words ("nothing will happen to me"). The thinking behind repeating this line twice was to emphasize the irony of these words and bring across an implicit message pertaining to susceptibility, i.e. that *tik* can affect you even if you think you cannot be affected.

3.5 Post-production study

3.5.1 Introduction

A post-production study was conducted among the target audience as part of the message development process. The aim of this study was to evaluate the draft version of the fotonovela in order to make possible improvements or changes if/where necessary. Similar to the pre-production study, a formative evaluation approach was followed, allowing for the opportunity to learn more about the preferences of the target group before developing the final version of the fotonovela. In other words, the idea was to gather perceptions of the target audience about the fotonovela that has been produced, but not yet 'introduced' to the target audience (to be done as part of the fotonovela evaluation study, see Chapter 4).

3.5.2 Method

Participants from the target group were recruited from the Prince Alfred Hamlet and Ceres area via the local community worker who also helped with recruiting participants for the pre-production study. This community worker invited community members to the local library, where they met

with the researcher on an individual basis in the presence of the community worker. Participants read the fotonovela and then completed a related questionnaire.

3.5.2.1 Participants

TABLE 3.7
Gender of participants in the post-production study

	Gender		Total % (Count)
	Male	Female	
Total % (Count)	44.4 (4)	55.6 (5)	100 (9)

As can be seen in Table 3.7, there was a relatively even distribution of males and females who took part in the study.

TABLE 3.8
Gender distribution over age group of participants in the post-production study

Gender	Age Group			Total
	≤19 % (Count)	20 – 34 % (Count)	≥35 % (Count)	% (Count)
Male	25.0 (1)	50.0 (2)	25.0 (1)	100 (4)
Female	0 (0)	20.0 (1)	80.0 (4)	100 (5)
Total % (Count)	11.1 (1)	33.3 (3)	55.6 (5)	100 (9)

As Table 3.8 shows, most participants in the post-production study were females of 35 years and older.

3.5.2.2 Materials

Those participants who agreed to take part completed a questionnaire. The questions could be categorized in five sections, namely, (a) respondents' appreciation of the fotonovela as medium to convey health messages, (b) their perceived effectiveness of the fotonovela as *tik* prevention tool, (c) how the story resonated with them, (d) how the characters resonated with them, and (e) possible recommendations for improvement.

3.5.2.3 Measures

All questions related to the fotonovela as medium to convey health messages and as *tik* prevention tool, as well as the story and the characters, were anchored in a 3-point scale (1 = *Yes*, 2 = *No, 3 = Not sure)*. To gauge respondents' appreciation of the fotonovela as medium to convey health messages, they were asked whether or not they liked reading a message about *tik* conveyed in this format and whether or not they thought this format contributed to conveying the health message in a more effective way. Respondents' perceived effectiveness of the fotonovela as *tik* prevention tool, involved enquiring whether they thought the fotonovela would prevent (a) people contemplating to use *tik* for the first time from using this substance and (b) current users of *tik* from using this drug again. To determine whether the story resonated with them, respondents were asked to indicate whether they thought the story was easy to understand, appealing/interesting, credible, realistic, and patronizing. To ascertain respondents' impressions of the characters, they had to indicate whether they thought the characters were realistic, credible and familiar. Issues probed around the story and characters are comparable to similar questions posed to test draft versions of fotonovelas in studies by Cabassa et al. (2012), Cabrera et al. (2002), and Chan et al. (2015). Moreover, an open-ended question was added to determine possible recommendations for improvements to the fotonovela respondents may have.

3.5.2.4 Procedure

The researcher explained to participants what the study was about after which their informed consent was obtained. Participants firstly read the fotonovela. After a few minutes, they were given the questionnaire to complete and requested to 'think aloud' while completing it, that is, explaining out loud their thinking behind the answers they gave as this helps to better gauge their thoughts and perceptions of the issue at hand (see Jansen et al., 1989, pp. 176-193).   The researcher was

careful not to lead participants on and only interjected when a question was not clear to participants. Verbal feedback from participants was tape-recorded with permission from the participants to supplement and help elucidate responses given in the questionnaires. A maximum of 15 minutes were spent with each respondent.

3.5.2.5 Analysis

Descriptive statistics (only frequencies) were used (mainly due to the small sample size of nine participants).

3.5.3 Results

TABLE 3.9
Results of the evaluation of the draft version of the fotonovela (close-ended questions)

Sections and underlying questions	# of Responses (N = 9)		
	Yes	No	Not Sure
Section 1: The fotonovela as medium to convey a health message			
1.1 Did you like that a message about *tik* was told using a fotonovela?	9	0	0
1.2 Did you think the fotonovela format contributed to conveying the health message more effectively?	7	0	2
Section 2: The fotonovela as *tik* prevention tool			
2.1 Do you think the fotonovela could prevent people from using *tik* for the first time?	5	0	4
2.2 Do you think the fotonovela could prevent current users of *tik* from using this substance again?	3	2	4
Section 3: The story			
3.1 Could you easily follow and understand the story? (Understanding)	8	1	0
3.2 Did you like the story and wanted to read to the end? (Appealing/Interesting)	9	0	0
3.3 Did it feel like the story merely served as a front to 'hide' the fact that a health message was being conveyed? (Patronizing)	3	4	2
3.4 Do you think the story can happen in real life? (Credible)	8	1	0
3.5 Do you think the story can happen in your community? (Realistic)	9	0	0
Section 4: The characters			
4.1 Do you think there can be people like the characters in real life? (Credible)	8	1	0
4.2 Do the characters remind you of people in your community? (Realistic)	8	1	0
4.3 Are you familiar with someone similar to Ricardo's character in the story? (Familiarity)	6	1	2
4.4 Are you familiar with someone similar to Anja's character in the story? (Familiarity)	9	0	0
4.5 Are you familiar with someone similar to Percy's character in the story? (Familiarity)	7	2	0

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As can be seen in Table 3.9, all participants said they liked reading a message about *tik* in this format, while seven of the nine participants thought the format contributed to conveying a health message in an effective way. Pertaining to the perceived effectiveness of the fotonovela as *tik* prevention tool, five of the nine participants said reading the fotonovela could prevent potential *tik* users from using this substance, while four participants were unsure. Three of the nine participants believed it could help prevent current *tik* users from using it again, while four participants were unsure.

In terms of story resonance, all participants thought the fotonovela story was appealing, interesting, and something that can happen in real life (i.e. it is a realistic story). Eight of the nine participants said the story was easy to follow and understand, while the same number of participants felt the story could happen in their own community (i.e. it is a credible story). Three of the nine participants perceived the story as patronizing, agreeing that it is a front to 'hide' the health message being conveyed. Concerning the reception of the characters, eight of the nine participants thought the characters in the fotonovela could exist in real life (i.e. credible) and reminded them of people in their own community (i.e. realistic characters). The majority of the participants said they were familiar with someone similar to each of the three main characters in the story. That is, six of the nine participants said that they were familiar with someone similar to Ricardo's character, all participants felt they were familiar with someone similar to Anja's character, while seven of the nine participants said they were familiar with someone similar to Percy's character.

As mentioned, an open-ended question was also included to ascertain the general impressions of and/or possible recommendations for improvement of the fotonovela. Positive feedback included the front page with its colour picture making respondents curious to read more ($n = 6$) and that the actual use of *tik* was portrayed in a realistic way ($n = 2$).

Four suggestions were made for improving the fotonovela message content, namely, (a) depicting the physical effects of *tik* ($n = 4$), (b) showing pictures of what a *tik* addict looks like ($n = 3$), (c) referencing *tik* users often having an increased sex drive ($n = 3$), and (d) mentioning *tik* addicts often commit crime as a means to pay for their addiction ($n = 2$).

Participants highlighted two criticisms of the plot. Firstly, the motivation as to why the police would raid Percy's house was felt to not be clear or convincing to participants ($n = 2$) in Scene 9 (the arrest scene, see Figure 3.10). Respondents ($n = 2$) thought an explanation as to what happened to Percy after Ricardo wakes up the next morning should have been included as part of the plot in Scene 7 (the waking up scene, see Figure 3.8). One idea for improving the plot was reported, specifically to show what happened to Percy after Ricardo wakes up ($n = 2$).

Three recommendations for changes to the character depictions were made. That is, to (a) show Percy's cunning side more explicitly ($n = 2$), (b) portray Ricardo as being more expressive/emotional for smoking *tik* and almost hurting Anja ($n = 1$), and (c) include more characters all together ($n = 1$).

A recommended improvement to the fotonovela format by participants ($n = 2$) was the inclusion of colour pages for the inside pages as well (only the front and back covers were printed in colour).

3.5.4 Discussion

The study presented here aimed at evaluating the draft version of the fotonovela in order to make possible improvements or changes if/where necessary. The evaluation of the draft version of the fotonovela was done by posing a set of questions that were divided in four sections.

For the first section, namely the participants' appreciation of the fotonovela as medium to convey a health message, all participants were in agreement that they enjoyed receiving health information in this medium and almost all perceived it as effectively contributing to conveying a health message.

Pertaining to the second section, most participants were either unconvinced or unsure if the fotonovela would prevent people from using *tik*. As one of these participants remarked in the open-ended question where comments or suggestions could be made, "the fotonovela will not help current *tik* addicts to kick the habit, as they are "already too in it". This was perhaps to be expected. As Unger et al. (2013, p. 405) remark, more intensive interventions than merely reading a fotonovela are probably necessary to convince people to make behaviour changes, especially in

case of an addiction. However, based on some of the suggestions for improvement, including the long-term effects of *tik* use could possibly help to increase the chances of the fotonovela influencing behaviour, as participants felt the lack of information in this regard was a shortcoming. Specifically, participants suggested the fotonovela could be improved by (a) placing more emphasis on the long-term physical effects of *tik*, e.g. on the brain and bone structure, (b) including pictures of what a *tik* addict looks like, and (c) showing how *tik* addiction often leads to crime.

For the most part, the story and characters resonated well with participants. However, some participants felt the story was a front to 'hide' the health message being conveyed. In other words, they perceived the fotonovela as patronizing or preachy. This finding could be regarded as an indication that the subtlety level of the health message could be improved upon. Moreover, deducing from the suggestions made related to the plot and characters, the following aspects could be considered for inclusion in the final version of the fotonovela: (a) improving the degree of plausibility behind the reasons for the police raid of Percy's house in Scene 9 (the arrest scene, Figure 3.10), and (b) developing the antagonist's character (Percy) further.

Other critical comments of note made by participants included the omission of references to *tik* increasing a person's libido/sex drive from the draft version of the fotonovela. References to an increased sex drive as a result of using *tik* were intentionally absent from the draft version of the fotonovela (as well as from scrutinization in the pre-production study), as it was thought that including such information could possibly have the unintended consequence of enticing some respondents to use this stimulant. Based on the feedback from participants, however, this short-term effect should perhaps be incorporated as part of the health information in the final fotonovela.

Moreover, findings showed that the full colour front page attracted the attention of participants and motivated them to read the fotonovela. Given this outcome, using full colour for the inside pages of the fotonovela could possibly help enhance its effect. This finding is different to what Cabassa et al. (2011) found, where readers of the fotonovela used in the study disliked the use of colour photos in the body of this health document.

In summary, a significant amount of time was spent with each participant as they were asked to talk about and explain their thinking behind their responses to the questions posed about the fotonovela. Overall, the findings were mostly positive. Yet, feedback from participants in certain areas raised possible red flags and were used to make improvements to the fotonovela.

3.6 Improvements to the draft version of the fotonovela

3.6.1 Introduction

Due to budget restrictions that prevented a full re-shoot, certain criticisms of the draft version of the fotonovela by participants in the post-production study could not be addressed in the final version of this document. These criticisms included portraying the character of Ricardo as being more expressive/emotional, including more characters in the fotonovela, and using full colour for the inside pages of the fotonovela.

Areas of criticism of the draft version of the fotonovela by participants, which were addressed in the final version of the fotonovela, included the following. Firstly, the depiction of the physical effects of *tik* and showing pictures of what a *tik* addict looks like were incorporated by including information about the long-term effects of *tik*. Secondly, the following critique participants in the post-production study had of the fotonovela was addressed by improving the degree of plausibility of the plot. These criticisms included (a) why the police would raid Percy's house, (b) not explaining what happened to Percy after Ricardo wakes up the next morning, (c) not showing Percy's cunning side more explicitly, (d) not referencing the effect *tik* has on sexual arousal, (e) not depicting how using *tik* often leads to crime, and (f) participants perceiving the fotonovela as patronizing or preachy. Moreover, changes based on the researcher's own ideas for improvement were also included in the final version of the fotonovela. Viewed as a whole, it was hoped that making these amendments would contribute to increasing the impact of the overall prevention message being conveyed as part of the story. A detailed discussion of these changes follows next.

3.6.2 Incorporating the long-term effects of *tik*

FIGURE 3.12. The final version of Scene 5 (The dinner scene).

During the development of the draft version of the fotonovela, the incorporation of information about the long-term effects of *tik* as part of the dialogue was considered, but it did not come to fruition due to reasons discussed earlier in this chapter. However, after coming to some new insights, the researcher decided to include information about the long-term effects of *tik* – which incorporated references to the physical effects of *tik* and showing pictures of what a *tik* addict looks like – as part of the final version of Scene 5 (the dinner scene, Figure 3.12). Including the long-term effects of *tik* as part of this scene was relatively simple and inexpensive to execute, as the original actors did not have to be re-hired nor was a re-shoot of any scene necessary. This information and how it was incorporated in the fotonovela are discussed next.

In the draft version of Scene 5 (the dinner scene, Figure 3.6), Anja raises her concerns about Ricardo's friendship with Percy, whose *tik* habit she feels might rub off on him (Ricardo). In response, Ricardo assures Anja that he does not use *tik*. He tells her Percy is only a casual *tik* user and does not deal in drugs, so the police have no reason to raid his house. Ricardo then promises Anja he will not smoke *tik* and nothing will happen to him (Ricardo). The scene ends with Anja feeling certain this will indeed be the case as Ricardo will keep his word. In the final version of Scene 5 (the dinner scene, Figure 3.12) as per the draft version, Anja raises the issue of Percy's *tik* habit influencing Ricardo in a negative way. However, in contrast to the draft version of this scene, Anja now asks Ricardo if she can show him something. After Ricardo agrees, Anja shows him two brochures mainly depicting the long-term effects of *tik* in an attempt to persuade him to end his friendship with Percy and ensure that he never uses *tik* (this did not necessitate a re-shoot, see discussion to follow). The brochures clearly upset Ricardo and he asks Anja to put them away as they are busy having dinner. The final version of this scene ends in a similar way to the draft version of this scene, with Ricardo promising Anja he will not use *tik* and nothing will happen to him, with Anja feeling satisfied that this will indeed be the case as Ricardo has made her a promise not to use *tik*.

Developing the additional shot where Anja shows Ricardo the brochures required taking one extra photo. However, this did not necessitate a re-shoot. This photo was a close-up of Anja's hand pointing at the two brochures. As only a small part of Anja's hand was visible in the bottom-left corner of the photo pointing at the two brochures, the original actress portraying Anja did not have

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to be involved to take this added shot. As a substitute, a Coloured female colleague of the researcher volunteered to stand-in as Anja's character in the photograph (at no extra cost). To create the shot, she was asked to place her hand on a table next to the two brochures while pointing at them. The brochures were strategically placed side-by-side with their front covers clearly visible. Extra dialogue was also added in a speech bubble at the bottom of this photo. This speech bubble represented Anja talking to Ricardo about the two brochures. This photo was added as a full-page picture in the final version of the fotonovela.[25] Both brochures depicted in the shot were designed by the researcher, with the specific aim of conveying the long-term effects of *tik*. In addition, the speech bubble in this shot of Anja talking to Ricardo also conveyed information about the long-term effects of *tik*. The cover of the first brochure contained scary pictures depicting the long-term physical effects of *tik* use, i.e. physical deterioration by showing a before and after picture of a *tik* addict with sores on the face and in the mouth as well as two pictures of extreme tooth decay and lesions on the skin. The brochure carried the caption "*Tik*…en djy sal soe lyk!" (Use *Tik* and you will look like this!). The second brochure had a picture of an abused woman with the caption "*Tik* vernietig families!" (*Tik* destroys families!). Anja mentions some of the observable long-term effects of *tik* use in her warning to Ricardo (depicted in the speech bubble). She refers to *tik* possibly leading to rotten teeth, sores, lesions, and brittle bones, as well as the less observable long-term effects of *tik*, i.e. physical deterioration, damage to the brain, paranoia and delusions.

The decision to include the additional shot describing the long-term effects of *tik* as part of the final version of Scene 5 (the dinner scene, Figure 3.12), was that it fitted the rationale of the plot at that specific point. Anja taking some sort of action to prevent Ricardo from using *tik* during this scene was considered a likely course of action based on what the reader knows from the three prior scenes. In the first of these prior scenes, namely Scene 2 (the package scene, Figure 3.3), Ricardo drops off a package at Ricardo's house where Ricardo tries to tempt him into using *tik.* In the next scene, Scene 3 (The kitchen scene, Figure 3.4), Ricardo tells Anja he was at Percy's house, with Anja responding by saying she cannot believe they are still friends and that she has heard Percy is

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[25] As a result of the page added to the final version of Scene 5 (the dinner scene, Figure 3.12), the preceding scene i.e. Scene 4 (the soccer scene, Figure 3.5) was reduced to one page in the final version of the fotonovela to fit the layout of 24 pages. The content of the final and draft versions of the soccer scene, however, remained the same.

involved with *tik*. She warns Ricardo that being friends with Percy may get him into trouble. In the last scene prior to Scene 5 (the dinner scene, Figure3.12), namely Scene 4 (The soccer scene, Figure 3.5), Ricardo visits Percy's house to watch soccer where Percy again attempts to entice him into using *tik.* Thus, by the time Anja shows Ricardo the brochures during Scene 5 (the dinner scene, Figure 3.12), the reader already knows that (a) Anja was worried about Ricardo becoming involved with *tik* because of his friendship with Percy, and (b) Percy had tried to convince Ricardo to use *tik* twice previously already. It was therefore felt the motivation for Anja to take some sort of action in an effort to prevent Ricardo from using *tik* was well established in these previous scenes. Hence, it was expected that the reader may perceive Anja showing Ricardo the brochures as a likely course of action, possibly increasing the chances of the health message being accepted by the reader.

3.6.3 Improving the degree of plausibility of the plot

3.6.3.1 Adding a new plot 'layer'

FIGURE 3.13. The final version of Scene 9 (The arrest scene).

The plot was critiqued by participants in the post-production study for the lack of plausibility behind the reasons for the police raid of Percy's house in the draft version of Scene 9 (the arrest scene, Figure 3.10). To explain: Up until the point where the police arrive to conduct a *tik* raid on Percy's house, Percy is portrayed as a casual *tik* user, smoking this substance over weekends. This is confirmed to the reader in the draft version of Scene 5 (the dinner scene, Figure 3.6) involving Ricardo and Anja, when Ricardo tells Anja the police had no reason to raid Percy's house, as he is a casual *tik* user and does not deal in drugs. Thus, based on what the reader knows up until the point where the police raid Percy's house for *tik*, it does not seem logical for the police to conduct such a raid. In other words, the *tik* raid of Percy's house may be considered a plot hole as it goes against the flow of logic established by the story's plot. Hence, an 'extra layer' was added to the plot in order to improve the degree of plausibility behind the reasons for the police raid of Percy's house.

As explained earlier, the plot revolved around Ricardo (the protagonist) who is a non-user of *tik,* but is negatively affected by this drug after being persuaded by his best friend, Percy (the antagonist), to smoke it one evening. Ricardo then suffers from the short-term effects of *tik* as well as being arrested for possession of this substance. The 'extra layer' added to the plot involved giving Ricardo an additional issue to deal with. The additional issue entailed Ricardo assaulting Percy's next-door neighbour the evening he smoked *tik* at Percy's house, eventually being arrested for this offence. As part of this plotline, it is also revealed that Percy (a) smoked *tik* the same evening Ricardo did, (b) was the initiator of this assault, and (c) was also arrested by the police for this transgression. To incorporate these elements, the plot was changed as follows: In the draft version of Scene 9 (the arrest scene, Figure 3.10), the police confront Ricardo and Anja at Percy's house on suspicion of it being a house where drugs (specifically *tik*) are manufactured and/or sold. However, in the final version of Scene 9 (the arrest scene, Figure 3.13), the motivation for the police going to Percy's house was changed to them trying to find Ricardo on suspicion of assault. At the start of this scene, the reader is informed as part of the commentary that the police are looking for Ricardo, but without stating a reason as to why. As the police confront Ricardo and Anja, they comment "Djy's die ander jong wat die girlie next door aangerand het! Djulle was mos jars en kon nie djulle way met haar kry nie!" (You were the other young man who assaulted the female neighbour next door. You were sexually aroused and you could not have your way with

her!). The police then tell Ricardo they caught his friend while under the influence of *tik* and he 'confessed everything', also demanding he shows them where the *tik* is. Here, it is revealed the police were aware of all this information because Percy was caught and told them they smoked *tik* at his house*,* became highly aroused, attempted to have sex with the neighbour, and assaulted her when she refused to consent. It is also implied Percy told the police Ricardo may be at his house. This offered an explanation as to why the police showed up at Percy's house looking for Ricardo.

When Ricardo reacts to these accusations by saying he has no idea what they are talking about, the police retort by saying he (Ricardo) ran away from them the previous night when they tried to arrest him. This confirmed Ricardo's involvement in the assault. Ricardo later on confesses to Anja that he smoked *tik* and assaulted Percy's neighbour. Percy's confession also fulfilled the purpose of helping to avoid the plot hole as to why the police would raid Percy's house looking for *tik*. Percy masterminding the assault of his female neighbour was added in order to deepen the involvement of this character with the plot. With the root cause of the assault being blamed on uncontrollable carnal urges, an attempt was made to illustrate that heightened sexual arousal within the context of using *tik* does not necessarily result in pleasurable outcomes.

Adding the elements discussed above to the plot did not require a re-shoot of any scene. The changes were incorporated by altering parts of the dialogue and using the same photos from the draft version of the fotonovela. In summary, adding the additional plotline not only helped to explain why the police would raid Percy's house, it also addressed other perceived shortcomings of the draft fotonovela reported by participants in the post-production study. More specifically, it helped to (a) explain what happened to Percy after Ricardo wakes up the next morning, (b) show Percy's cunning side more explicitly (also see Section 3.7.3.2), (c) made it possible to include a reference to the effect *tik* has on sexual arousal, (d) showed how using *tik* often leads to crime, and (e) improved the subtlety level of the health message. The additional plotline also made it possible to include the short-term effect of *tik* of having *false confidence to do dangerous or irresponsible acts*. Morever, it was hoped that by enhancing the plot through adding an 'extra layer' would also improve its overall impact.

3.6.3.2 Changes to Percy's character depiction to fit the revised plot
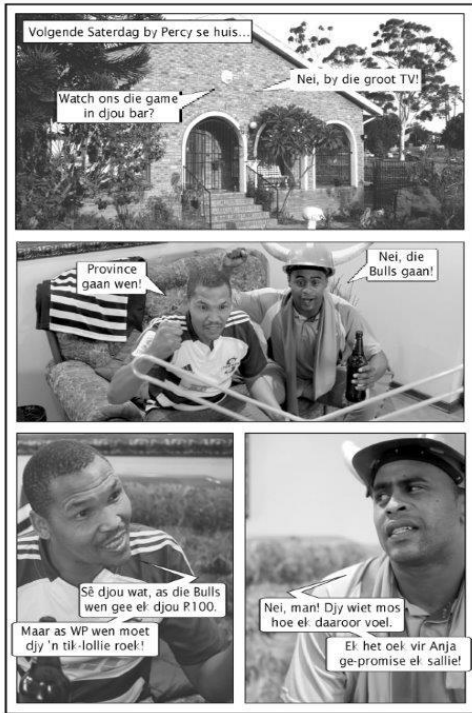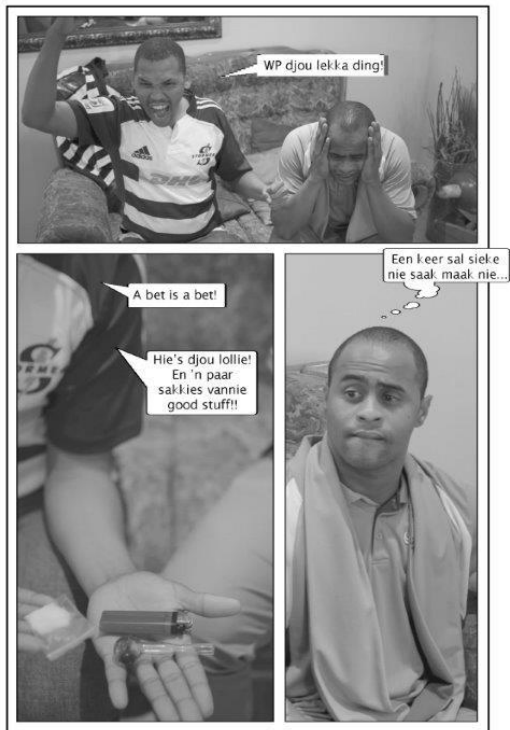
FIGURE 3.14. The final version of Scene 6 (The sports bet scene).

A close-up shot of Percy's face was added after the shot of Ricardo becoming high on *tik* in the final version of Scene 6 (the sports bet scene, Figure 3.14). In this added shot, the reader sees Percy thinking to himself "Ricardo is hoog. Nou gaan ek ôk 'n lollie roek. Hmmm…en dan kan ôs die girlie next door gaan uitcheck…" (Ricardo is high. Now I am also going to smoke *tik*. Hmmm…and then we can go check out the girlie next door). By using wording with a suggestive undertone ("check out the girlie"), the idea was to make the reader wonder if this line was foreshadowing something inappropriate happening involving Ricardo and Percy. "Check out" is slang for looking at a person's features to determine his/her level of sexual attractiveness. Percy is thus implying they should visit his female neighbour with the preconceived notion of possibly having sex with her. This shot now formed the last shot in the final version of Scene 6 (the sports bet scene, Figure 3.14). In the draft version of Scene 6 (the sports bet scene, Figure 3.7) where Percy coaxes Ricardo into smoking *tik*, the last shot was of Ricardo passing out on the couch, with the commentary reading "…uiteindelik raak hy aan die slaap" (…at last he falls asleep"). This shot was excluded in the final version of Scene 6 (the sports bet scene, Figure 3.14) as it did not fit the revised plot anymore. In summary, the changes made to Scene 6 (the sports bet scene) was thus an attempt to address the lack of development of Percy's character as highlighted by participants in the post-production study. Specifically, Percy's character was enhanced by adding a Machiavellian quality to his already established swindler persona. The changes made here to Percy's character were done by using an existing photo from the shoot (not used in the draft version of the fotonovela) and adding the additional dialogue.
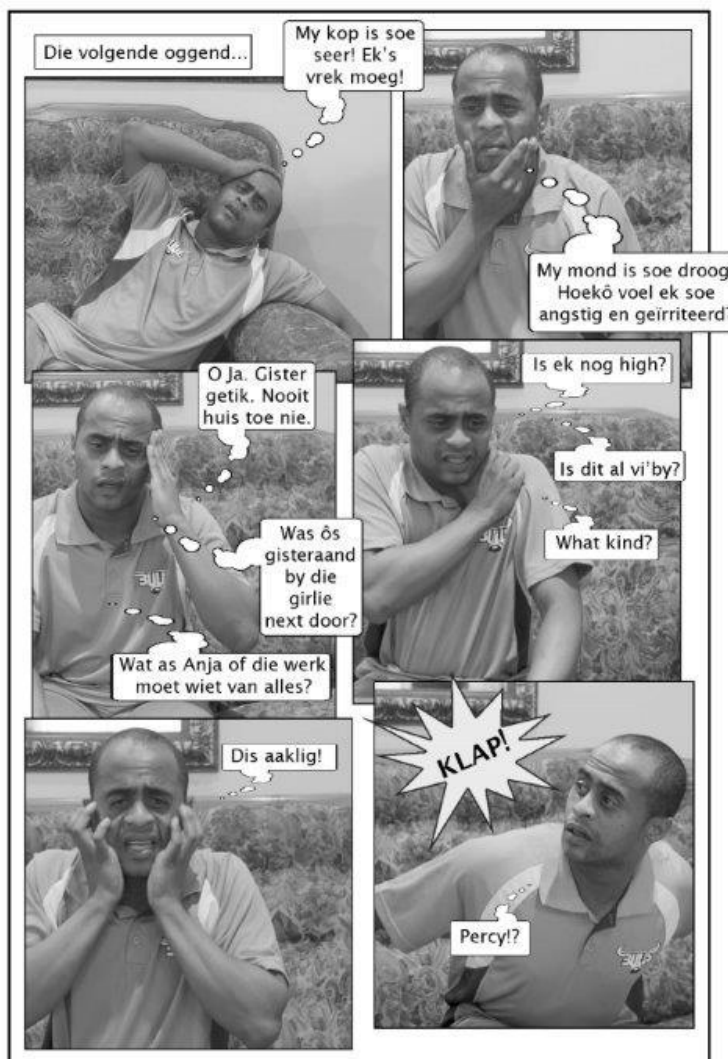
FIGURE 3.15. The final version of Scene 7 (The waking up scene).

Hints of Ricardo and Percy going through with Percy's idea of visiting his female neighbour – but without confirming whether they visited her and consequently whether something untoward happened – were added to the dialogue in two ensuing scenes so to build tension and increase suspense. This was firstly done in the final version of Scene 7 (the waking up scene, Figure 3.15), where Ricardo is trying to make sense of the situation he finds himself in while suffering from the short-term effects of smoking *tik* the previous night, the line "Was ôs gisteraand by die girlie next door?" (Did we go to the girlie next door last night?) was added.
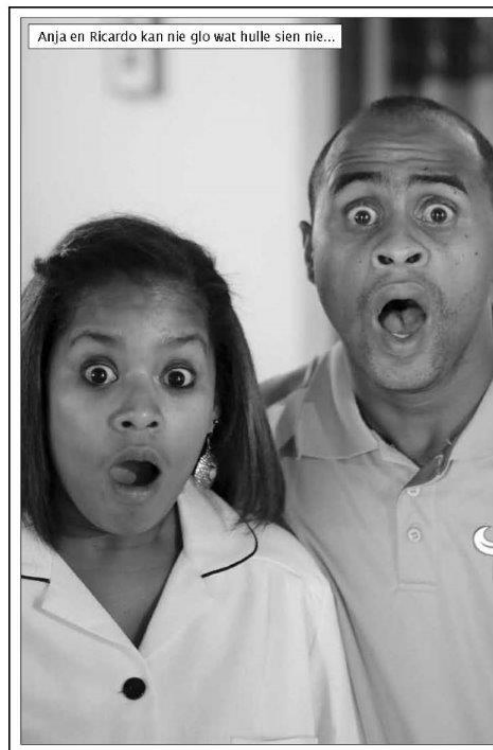
FIGURE 3.16. The final version of Scene 8 (The beer bottle scene).

The second hint of Ricardo and Percy going through with Percy's idea of visiting his female neighbour – but without confirming whether they visited her and consequently whether something untoward happened – was added in the final version of Scene 8 (the beer bottle scene, Figure 3.16) where Anja arrives at Percy's house looking for Ricardo. In the draft version of Scene 8 (the beer bottle scene, Figure 3.9), Ricardo says he does not know what happened the previous night in response to Anja's questions of where he was, why the house is in such a mess and where Percy was. In the final version of Scene 8 (the beer bottle scene, Figure 3.16), Anja's dialogue was changed to now explicitly ask Ricardo why he didn't come home and where they were the previous night, to which Ricardo responds "Ôs… Ôs…Ek dink ôs was next door gewies" (We…We…I think we were next door last night").

As can be deduced from the added information in the final versions of Scene 7 (the waking up scene, Figure 3.15) and Scene 8 (the beer bottle scene, Figure 3.16), the reader finds out Ricardo and Percy seemingly did visit the female neighbour, but Ricardo cannot fully recollect what had happened. The reader is thus left wondering whether they did or did not go to the neighbour, and if they did, whether they had sex with her or not.

3.6.3.3 Additional changes to fit the revised plot

Certain details in particular scenes had to be changed or added in order for the revised plot to make sense. The changes were incorporated by altering parts of the dialogue while using the existing photos from the draft version of the fotonovela in a re-arranged format.

As discussed, at the end of the final version of Scene 6 (the sports bet scene, Figure 3.14) where Percy coaxes Ricardo into smoking *tik,* a close-up shot of Percy saying, "Ricardo is hoog. Nou gaan ek ôk 'n lollie roek. Hmmm…en dan kan ôs die girlie next door gaan uitcheck…" (Ricardo is high. Now I am also going to smoke *tik*. Hmmm…and then we can go check out the girlie next door) was included. This meant that in the preceding shot where Ricardo is seen laying on a couch becoming high on *tik*, the commentary "Minutes later…" had to be added to point out that time had passed in order to allow for Ricardo to become high on *tik*, and thus for Percy's comments "Ricardo is hoog." (Ricardo is high) to make sense. The original commentary accompanying the shot of Ricardo sprawled on the couch in the draft version of Scene 6 (the sports bet scene, Figure

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3.7) read "Ricardo raak hoog op *tik*. Hy kan nie stil sit nie. Hy bly heel nag wakker…" (Ricardo is becoming high on *tik*. He cannot sit still. He stays awake all night…). This commentary was deleted in its entirety from the final version of this shot for the following reasons. Firstly, the line "Ricardo is becoming high on *tik*" was omitted as this was already evident in the shot. Secondly, the line "He cannot sit still" was originally included to try and convey one of the short-term effects of *tik* i.e. *jerky movements/fast reflexes*, but on second thought was excluded as Ricardo is seen sprawled on a couch in this shot and thus did not logically make sense to include. Thirdly, the line "He stays awake all night…" was deleted due to it technically being incorrect in terms of both the original and revised plot. Ricardo, in fact, did fall asleep as he is seen waking up at Percy's house at the beginning of the next scene. As this commentary was deleted in its entirety from the final version of this shot, it meant that the reference to the health information in this commentary about the short-term effects of *tik*, i.e. *alertness/wakefulness*, was omitted.

In the final version of Scene 9 (the arrest scene, Figure 3.13) where the police find *tik* in Percy's house and arrest Ricardo and Anja for possession of *tik*, the line "En djy meneer oek vir aanranding!" (And you sir, also for assault!) was added to the dialogue of the policeman to fit the revised plot. In the draft version of Scene 9 (the arrest scene, Figure 3.10), Ricardo's first reaction to being arrested is to say "Dis Percy sinne!" (It's Percy's!). The police then confront Ricardo about his demeanour, asking him "Djou oë is groot. Djy's kriewelrig. Stiek djy iets weg, meneer?" (Your eyes are big. You look antsy. Are you hiding something, mister?). Given the revised plot, this sequence was changed as follows in the final version of Scene 9 (the arrest scene, Figure 3.13).

Firstly, Ricardo's immediate reaction to being arrested was changed to "Besit van *tik?* Assault?" (Possession of *tik*? Assault?) so to emphasize him being arrested for these two charges. The retort from the police was changed to "Dis tyd djy confess, meneer!" (Its time to confess, mister!). This change was needed because – following the logic of the revised plot – the police were already aware of Ricardo having smoked *tik* by the time this confrontation takes place (as Percy had confessed everything). It thus made little sense for the police to confront Ricardo about his demeanour at this point in the timeline of the revised plot. However, at this point in the timeline of the original plot, the police did not know whether Ricardo had smoked *tik* or not, hence it made sense for them to make these observations in order to effect a confession. The changes made to

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Scene 9 (the arrest scene) to fit the revised plot, resulted in the line from the police contained in the draft version of this scene conveying health information about the short-term effects of *tik*, i.e. *eyes looking big* and *jerky movements/fast reflexes*, being omitted.
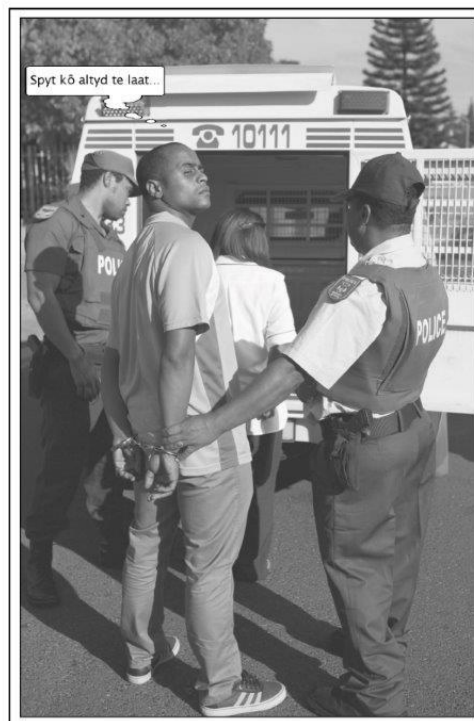
FIGURE 3.17. The final version of Scene 10 (The confession scene).

In the final version of Scene 10 (the confession scene, Figure 3.17) after Ricardo confesses to smoking *tik*, the following lines were added to fit the revised plot. Firstly, Anja begs Ricardo to deny that he assaulted Percy's neighbour by saying "Sê 'seblief djy't nie die girlie next door aangerand nie??! (Please say you didn't assault the girlie next door??!). Secondly, Ricardo responds by telling Anja "As djy *tik*, doen djy verkeerde dinge. As ek net nie daai lollie geroek het nie…" (You do the wrong things when you use *tik*. If only I had not smoked *tik*).

3.6.4 Changes made based on the researcher's own ideas for improvement

Further changes and additions of note to scenes in the draft version of the fotonovela based on the researcher's own ideas for improvement are discussed next, including the motivation and reasoning behind it. These changes and additions were made by altering parts of the dialogue and re-arranging some of the existing photos from the draft version of the fotonovela.

3.6.4.1 Scene 5 (the dinner scene)

In the draft version of Scene 5 (the dinner scene, Figure 3.6), Anja tells Ricardo she seriously needs to talk to him about Percy and his usage of *tik*, stating, "Ek's worried iets gaan happen" (I am worried something will happen). Ricardo reacts to Anja's concern by saying "Soos wat? Djy wiet ek *tik* nie" (Like what? You know I don't use *tik*). In the final version of Scene 5 (the dinner scene, Figure 3.12), Anja's line "Ek's worried iets gaan happen" (I am worried something will happen) was changed to "Ek's bang iets gaan happen" (I am scared something will happen). In addition, the line "Ek's bang djy begin oek *tik*" (I am scared you will also start using *tik*) was also added to Anja's dialogue in this conversation. The word "bang" (scared) was included here twice in order to make a direct reference to the emotion of fear being experienced in a *tik* context. As discussed earlier, the fotonovela evaluation study attempted to utilize the effects this emotion can have on message persuasion by incorporating fear appeal characteristics as part of the fotonovela. Ricardo's reaction to Anja's concern was changed to "Al weer die tikstorie? Wat sal happen?" (This *tik* story again? What will happen?). The reasoning was as follows: In Scene 3 (the kitchen scene) – the first scene between these two characters – Anja also raised her uneasiness about Ricardo becoming involved with *tik* because of being friends with Percy. Ricardo responded by telling Anja that she does not have anything to worry about. In other words, Scene 5 (the dinner scene) was the second time Anja had brought up her concerns of something happening to Ricardo

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because of Percy being involved with *tik*. Hence, the reader might expect Ricardo to feel annoyed because of Anja seemingly not showing faith in him the first time around when he told her he would not become involved with *tik*. It was thought Ricardo's original response to Anja's concern, conveyed in the line "Like what? You know I don't use *tik*" did not clearly convey a feeling of annoyance. Accordingly, it was changed to "This *tik* story again? What will happen?" It was thought the new line conveyed a feeling of annoyance or exasperation more clearly.

Ricardo's line in response to Anja's concern about him smoking *tik* in the draft version of Scene 5 (the dinner scene, Figure 3.6) was changed from "I promise, Babes! Ek sallie *tik* nie! Nothing will happen to me!" (I promise, Babes! I won't use *tik*. Nothing will happen to me!) to "I promise, Babes! I promise! Nothing will happen to me!" in the final version of Scene 5 (the dinner scene, Figure 3.12). It was decided to repeat the word "promise" twice to emphasize the fact that Ricardo made a promise to Anja not to smoke *tik* (only to break this promise later on). For similar reasons, the line in Anja's thinking sequence in the final shot of the draft version of Scene 5 (the dinner scene, Figure 3.6), namely "Ricardo is reg. Niks sal gebeur nie" (Ricardo is right. Nothing will happen), was changed to "'Cardo het ge-promise. Niks sal gebeur nie" (Ricardo promised. Nothing will happen) in the final version of Scene 5 (the dinner scene, Figure 3.12). That is, the word "promise" was included to reiterate the fact that Ricardo made a promise to her not to smoke *tik*, but breaks his promise later on. In this line, "Ricardo" was also changed to "'Cardo" as a subtle attempt at accentuating the loving, committed relationship between Ricardo and Anja by her having an endearing nickname for Ricardo.[26]

3.6.4.2 Scene 6 (the sports bet scene)

In the draft version of Scene 6 (the sports bet scene, Figure 3.7) where Percy coaxes Ricardo into smoking *tik*, Percy hands Ricardo *tik* to smoke and tells him "En 'n downertjie om lekker te slaap na die tyd!" (And a little downer to sleep well afterwards!). This line was excluded in the final version of Scene 6 (the sports bet scene, Figure 3.14). Although the former *tik* addict who acted as consultant on the project suggested adding this line (because *tik* users usually take some sort of

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[26] Anja rather referring to Ricardo by name in the draft version of Scene 10 (the confession scene, Figure 3.11) was also changed to "'Cardo" in the final version of Scene 10 (the confession scene, Figure 3.17).

"downer" or sedative after smoking *tik* to help them sleep better), including this line was thought to possibly be counterproductive to the prevention message being conveyed and was subsequently left out.

3.6.4.3 Scene 8 (the beer bottle scene)
Anja's line in the draft version of Scene 8 (the beer bottle scene, Figure 3.9) where she arrives at Percy's house looking for Ricardo, namely "Ek moet clinic toe gaan!" (I must go to the clinic), was changed to "Djy moet my clinic toe vat!" (You must take me to the clinic!) in the final version of Scene 8 (the beer bottle scene, Figure 3.16). This was done in order to make it more obvious to the reader why Anja was looking for Ricardo at Percy's house.

3.6.4.4 Scene 9 (the arrest scene)
The policeman's lines in two of the shots in the draft version of Scene 9 (the arrest scene, Figure 3.10) were slightly altered in the final version thereof in order to come across more strongly and authoritatively. Firstly, the line "Draai om! Hande teen die muur!" (Turn around! Hands against the wall!) in the draft version of Scene 9 (the arrest scene, Figure 3.10) was changed to "Hande teen die muur! Nie 'n woord nie!" (Hands against the wall! Not a word!) in the final version of Scene 9 (the arrest scene, scene, Figure 3.13). Secondly, the line "Djulle is hier. Daar's *tik* in die huis. Dis die feite!" (You are here. There's *tik* in the house. These are the facts!) in the draft version of Scene 9 (the arrest scene, Figure 3.10) was changed to "Bly stil! Daar's *tik* in dié huis gevind. Dis die feite!" (Keep quiet! *Tik* was found in this house. These are the facts!) in the final version of Scene 9 (the arrest scene, Figure 3.13).

3.6.4.5 Scene 10 (the confession scene)
The line "Maar dit was net die een keer…" (But it was just the one time…) in the draft version of Scene 10 (the confession scene, Figure 3.11) spoken by Ricardo to Anja after he confesses to losing a bet and smoking *tik*, was omitted in the final version of Scene 10 (the confession scene, Figure 3.17). It was thought this line may come across as trying to push a health message agenda and thus felt slightly forced, given it is clear to the reader at this point that Ricardo is not a *tik* user and does not use this substance regularly.

In Scene 10 (the confession scene), Anja reacts to Ricardo's confession of smoking *tik* by saying she cannot believe it, as Ricardo had made her a promise. However, before Anja can complete her sentence as to what this promise entailed, one of the police officers interrupts her. In the draft version of Scene 10 (the confession scene, Figure 3.11), the policeman interrupts her by saying "...nothing will happen to me???" This line was changed to "Wat het hy ge-promise? Nothing will happen to me???" (What did he promise? Nothing will happen to me???) in the final version of Scene 10 (the confession scene, Figure 3.17). It was felt the sarcastic tone of this remark – as something did happen to Ricardo i.e. he was arrested for possession of *tik* – was conveyed more clearly by adding the extra line "Wat het hy ge-promise?" (What did he promise?)

As discussed, in the final version of Scene 10 (the confession scene, Figure3.17) after Ricardo confesses to smoking *tik*, the line "Sê 'seblief djy't nie die girlie next door aangerand nie??! (Please say you didn't assault the girlie next door??!) spoken by Anja, was added to fit the revised plot. This resulted in one of the lines from the draft version of Scene 10 (the confession scene, Figure 3.11) about Anja referencing her pregnant state being omitted. This reference was considered important to accentuate Anja's vulnerability in the wake of being arrested in order to help increase the chances of especially female readers identifying with Anja's character. Therefore, it was decided to try and include it elsewhere. This reference was consequently built-in earlier in the final version of Scene 9 (the arrest scene, Figure 3.13) as Anja's immediate reaction to being arrested for *tik* possession with Anja saying "Seblief, ek kannie nou mang nie! Ek's pregnant!" (Please, I cannot go to prison! I'm pregnant!). The inclusion of this line here, in turn, meant Anja's original reaction to being arrested for *tik* possession in the draft version of Scene 9 (the arrest scene, Figure 3.10), namely the line "Ôs is respectable members of the community met decent jobs!" (We are respectable members of the community with decent jobs!) was omitted. The implicit message contained in this line pertaining to susceptibility – that *tik* can affect you no matter if you are a good, hard working and responsible person – is already conveyed through Ricardo's character and what happens to him in the story. Hence, it was thought this line could be omitted here.

In the draft version of the Scene 10 (the confession scene, Figure 3.11), the last shot is of Ricardo and Anja being loaded into a police van. The reader sees Ricardo thinking to himself "Meng djou met die semels, en die varke vriet djou op…" This is a well-known Afrikaans saying which, if

translated literally, means "if you are mixed in with pig's food, they will eat you". Its real meaning relates to how being friends with the wrong people turns you into one of them or results in you being perceived by outsiders as one of them. This line was changed to "Spyt kô altyd te laat…" in the final version of the Scene 10 (the confession scene, Figure 3.17), as it was felt repeating the title of the fotonovela as the last words seen by the reader would tie up the story better and have more impact to emphasize the overall prevention message of the story.

3.7 The final version of the fotonovela[27]

The content of the final version of the fotonovela did not include all possible health information about *tik*. Left out, for instance, were references to *tik* possibly causing *sleep disturbances*, *weight loss*, *rapid speech*, *anhedonia*, *jerky movements/fast reflexes*, *wakefulness/alertness*, *loss of appetite* and *suicidal thoughts*. Bear in mind that it is not always possible to convey all health information related to a specific health issue in a single fotonovela. A fotonovela first and foremost tells a story, which needs to be convincing, coherent and cohesive at all times in order for the health message to be conveyed persuasively. A possible solution here, as Boyte et al. (2014) suggest, is to include a Q&A section at the back of a health-related fotonovela to address additional health issues or information not covered in the story. Similar to Duizer et al. (2014) and Koops van't Jagt et al. (2017), it was decided not to do so in the context of the overall study, as one of the objectives of the current study was to determine and explain the persuasive effect of a narrative, more specifically of a fotonovela. Including a Q&A section would have made it unclear to what extent possible effects could be attributed to its narrative format.

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[27] See Addendum B for the final version of the fotonovela.

CHAPTER 4. FOTONOVELA EVALUATION STUDY

4.1 Introduction

This chapter provides details of a study in which the fotonovela that was developed as discussed in Chapter 3, namely *Spyt kom te laat*, was evaluated, in order to provide answers to the two research questions presented in Chapter 1 and to test the 11 hypotheses formulated in that chapter. To answer **RQ1,** firstly the effects of three different message conditions in terms of respondents' knowledge level, attitudes and intentions were measured. To present potential explanations for differences in participants' behavioural attitudes and behavioural intentions, **H1 - H10** were tested. This entailed testing whether differences found in attitudes and intentions of readers of the fotonovela were associated with (a) theoretical constructs related to narrative engagement (transportation, identification, perceived similarity, perceived vulnerability, and counterarguing), (b) theoretical constructs related to fear appeals (perceived threat, perceived self-efficacy, and fear), and (c) the arousal of other emotions in addition to fear (surprise, sadness, anger, and compassion). Although not offering explanations for differences in participants' attitudes and intentions as such, the associations between behavioural attitudes, behavioural intentions, and knowledge level for all respondents and for each condition were tested as part of **H11**. To answer **RQ2,** it was determined how people felt about the fotonovela and if they would prefer it to a more traditional type of information brochure about this topic.

4.2 Method

A randomized controlled trial was conducted. Respondents were randomly assigned to one of three groups in a between-groups experimental design: one group who read the fotonovela, another group who read a traditional brochure on *tik*, and a no message control group who only answered questions about their knowledge of *tik* and about their related attitudes and behavioural intentions. In all three groups, questionnaires were used to measure participants' responses. Responses in the fotonovela group and the traditional brochure group were captured immediately after exposure to the message.

4.2.1 Participants

Participants were mainly Coloured people from previously disadvantaged communities in the Western Cape province of SA, specifically, participants hailed from the rural towns and farming regions of Swellendam, Bredasdorp, Prince Alfred Hamlet and Ceres in the Western Cape. Other participants were members of the target audience from the town of Calvinia in the Northern Cape. These rural, outlying towns and farming regions were specifically chosen as substance abuse (specifically *tik* abuse) is recorded as a common social and behavioural problem in these areas. Apart from fitting the inclusion criteria for participants, the study sample helped to address the often uttered criticism of there being an overreliance on university student samples in health-related research (see e.g. Hastings, Stead, & Webb, 2004). In addition, as far as could be ascertained, research as proposed in this study had not before been conducted among the target group in the chosen target areas.

Similar to the strategy used in the pre-production and post-production studies discussed in Chapter 3, the researcher mobilized community workers with whom he had worked on past community intervention projects in the targeted areas to act as field workers for this study. These community workers helped with the recruitment of participants and assisted with data collection.

TABLE 4.1
Numbers of participants at the various data collection sites in the fotonovela evaluation study

Data Collection Site	
Swellendam	51
Bredasdorp	33
Ceres/Prince Alfred Hamlet	86
Calvinia	133
Total	303

As Table 4.1 shows, 303 individuals participated in the fotonovela evaluation study at various sites. In Swellendam, the researcher piggybacked on an HIV and Aids health intervention of the Africa Centre for municipal workers, where data for the study were collected prior to the Africa Centre's intervention at the municipality offices during working hours. A similar recruitment strategy was followed in Bredasdorp, where again municipal workers were targeted, with the data collection session held at a local community centre during working hours. Participants from the Prince Alfred Hamlet and Ceres area were farm workers from *De Eike* farm. Gaining access to workers from this farm was also done by piggybacking on an HIV-related health intervention organized by the Africa Centre on the farm itself in the early evening after the day's work. In Calvinia, community members were mobilized by a field worker in the area to be part of the research project via advertisements on the local radio station of the town as well as via flyers and posters distributed around town. The data collection session was held on a Sunday afternoon at the local community centre. Incentives to attend the session included lucky draw grocery vouchers and free tea, coffee and light snacks. Participants were people from the general public and youths from Hantam High School.

TABLE 4.2
Gender of participants in the fotonovela evaluation study

	Gender		
	Male	Female	
Total % (Count)	52.5 (157)	47.5 (142)	100 (299)

As can be seen in Table 4.2, there was a relatively even distribution of males and females who participated in the study.

TABLE 4.3
Gender distribution over age group of participants in the fotonovela evaluation study

Gender	Age Group			Total
	≤19	20 – 34	≥35	
	% (Count)	% (Count)	% (Count)	% (Count)
Male	25.6 (40)	32.1 (50)	42.3 (66)	100 (156)
Female	44.7 (63)	19.1 (27)	36.2 (51)	100 (141)
Total % (Count)	34.7 (103)	25.9 (77)	39.4 (117)	100 (297)

As can be seen in Table 4.3, the gender distribution of participants over age group was relatively even, apart from the low number of female participants in the 20 – 34 age group.

TABLE 4.4
Gender distribution over education level of participants in the fotonovela evaluation study

Gender	Education Level			Total
	At school	<Grade 10	≥Grade 10	
	% (Count)	% (Count)	% (Count)	% (Count)
Male	26.2 (39)	30.9 (46)	43.0 (64)	100 (149)
Female	45.0 (59)	28.2 (37)	26.7 (35)	100 (131)
Total % (Count)	35.0 (98)	29.6 (83)	35.4 (99)	100 (280)

As Table 4.4 shows, the gender distribution of participants over educational level was relatively even. Almost double the number of males had a Grade 10 or higher qualification compared to females.

TABLE 4.5
Education level distribution over age group of participants in the fotonovela evaluation study

| Education Level | Age Group | | | Total |
	≤19 % (Count)	20 – 34 % (Count)	≥35 % (Count)	% (Count)
At school	94.9 (93)	4.1 (4)	1 (1)	100 (98)
<Grade 10	3.7 (3)	23.5 (19)	72.8 (59)	100 (81)
≥Grade 10	7 (7)	51 (51)	42 (42)	100 (100)
Total % (Count)	36.9 (103)	26.5 (74)	36.6 (102)	100 (279)

As can be seen in Table 4.5, the majority of participants who did not have a Grade 10 qualification were in the 35 years and older age group, while the majority of participants who had a Grade 10 or higher qualification were in the 20 – 34 age group.

4.2.2 Materials

The fotonovela that was developed as discussed in Chapter 3 and a traditional brochure served as materials in this study.

Initially, the idea was to compare the fotonovela with an existing traditional brochure about *tik*, which would be similar in terms of the health information content. After liaising with the Department of Health of the Western Cape Government, the non-governmental organization the South African National Council on Alcoholism and Drug Dependence (SANCA), as well as several other NGO's in the health sector, two Afrikaans brochures specifically about *tik* used in the health sector were sourced. However, both these brochures were not deemed suitable for this study for the following reasons.

The first brochure, *Die wrede feite oor Tik* by the non-profit organization Alcohol and Drug Concerns-Cape, contained incorrect health information about the dangers of *tik* as well as quite a

number of spelling errors. The brochure, for instance, incorrectly stated that a short-term effect of *tik* is that it leads to an increased appetite, which should be a loss of appetite (National Institute on Drug Abuse, 2014). Moreover, not all health information included in the fotonovela could be found in this brochure. The second brochure, *Tik is nie vir my nie* by the non-profit organization Christian Literature Fund, contained factual information as well as a short narrative insert about the first-person experiences of a *tik* addict. As this brochure also contained a narrative component, it was decided not to use it, as it would then not be possible to determine the effectiveness of either a narrative or a non-narrative type message format to convey health information about *tik*, but only of two different narrative forms. Hence, the researcher developed a traditional brochure himself, which included the health information contained in the fotonovela (see below) and did not include a narrative component. The two Afrikaans brochures mentioned above, to some extent, served as sources of inspiration for developing the traditional brochure. However, a number of additions and improvements had to be made in order for it to be considered as serious competition for the fotonovela. See Addendum C for the brochure *Die wrede feite oor Tik* and Addendum D for the brochure *Tik is nie vir my nie*.

The traditional brochure developed was therefore mainly modelled on the brochure *Tik – What are the Facts?* by SANCA. This brochure was used to help guide the development of the traditional brochure as it was recommended for use to the researcher by the Western Cape Government Health (see Addendum E for this brochure). The newly developed traditional brochure contained the health information about the effects of *tik* and efficacy information that was included in the fotonovela, as well as information about additional health-related effects of *tik* (see Table 4.6). Further information included in the traditional brochure, but not in the fotonovela, related to general aspects associated with *tik* use, namely, a scientific explanation of what *tik* is and how it affects the body, and contact information of where to seek help for *tik* addiction. This information was incorporated as such information typically forms part of a traditional type health brochure, as was the case with one of the brochures (*Tik – What are the Facts?*) the newly made traditional brochure was modelled on. See Table 4.6 for a summary of the differences between the information about *tik* contained in the fotonovela and information in the newly made traditional brochure. The front page of the newly made traditional brochure carried the caption *Tik - Hier is die Feite!* (*Tik - Here are the facts!*). It had a "pay-off" or "send-off" line on the back page, asking the rhetorical question "Is dit die moeite werd om met jou lewe te dobbel?" (Is it worth gambling with your

life?). Compared to the two traditional brochures originally sourced – the developed brochure included additional (and correct) health information and had no spelling errors. In summary, it was hoped that the newly made traditional brochure had a professional 'look and feel'. See Addendum F for the traditional brochure used in the current study.

The traditional brochure was developed in tri-fold format and printed in black and white.[28] A draft version of the traditional brochure was pre-tested for understanding among participants (N= 8) from Prince Alfred Hamlet who were similar to, but not included in, the group of participants in this study. There were no issues from participants around the understanding of the traditional brochure.

TABLE 4.6
Comparison of the information about *tik* included (✓) and excluded (×) in the fotonovela and in the traditional brochure

Health-related effects, non-health related effects, and general aspects associated with *tik* use	Fotonovela	Traditional Information Brochure
Dry mouth	✓	✓
Anxiety/Nervousness	✓	✓
Aggressive behaviour	✓	✓
Irritability	✓	✓
Violent behaviour	✓	✓
High sex drive	✓	✓
Argumentative behaviour	✓	✓
False confidence to do dangerous or irresponsible acts	✓	✓
Thinking other people want to do something bad to you	✓	✓
Seeing things that are not there	✓	✓
Marked general physical deterioration/makes you look old	✓	✓
Affecting the brain	✓	✓
Extreme tiredness	✓	✓
Smoking *tik* makes you feel like there are insects crawling under your skin (delusions)	✓	✓

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[28] Budget restrictions did not allow for the traditional brochure (including its cover) to be printed in partial or full colour.

Lesions on the skin	✓	✓
Tooth decay	✓	✓
Sores in the mouth	✓	✓
Withdrawal effects	✓	✓
Efficacy information associated with *tik*	✓	✓
Domestic violence	✓	✓
How *tik* is smoked/used	✓	✓
Arrest/imprisonment	✓	✗
Staring eyes/dilated pupils	✗	✓
Repetitive mannerisms	✗	✓
High energy levels/cannot sit still	✗	✓
Jerky movements/fast reflexes	✗	✓
Wakefulness/alertness	✗	✓
Rapid speech	✗	✓
Loss of appetite	✗	✓
Sleep disturbances	✗	✓
Affecting the lungs	✗	✓
Affecting the heart	✗	✓
Weight loss	✗	✓
Malnutrition	✗	✓
Anhedonia	✗	✓
Suicidal thoughts	✗	✓
Scientific explanation of what *tik* is and how it affects the body	✗	✓
Contact information where to seek help for *tik* addiction	✗	✓

4.2.3 Measures

Participants in each of the three conditions completed different questionnaires. All questions were presented in Afrikaans. All three groups completed questions about the variables, *attitude* and *intention*, as well as knowledge level related to *tik*. In addition, the fotonovela group and the group who read a traditional brochure on *tik* also completed a question about *health message preference*. Only the fotonovela group further also completed questions about (a) narrative engagement

variables (*transportation*, *identification*, *perceived similarity*, *perceived vulnerability*, and *counterarguing*), (b) fear appeal variables (*perceived threat*, *perceived self-efficacy*, and *fear*), and (c) emotions (*fear*, *surprise*, *sadness*, *anger*, and *compassion*). In order to be able to measure all the variables as well as to not over-burden respondents with a lengthy questionnaire, some variables were only measured with a small set of items.

As the questionnaire completed in the fotonovela condition also contained the questions for both the group who read the traditional brochure and the no message control group, only the questionnaire from the fotonovela group was pre-tested for understanding. This pre-test was done among participants from Prince Alfred Hamlet (N = 8) who were similar to the intended target audience (though not the same participants to the fotonovela evaluation study). There were no issues around understanding of questions or instructions of the questionnaire. The only issue identified was a typo regarding the numbering of the questions. See Addendum G for the questionnaire completed in the fotonovela condition.

4.2.3.1 Outcome variables

Items and scales for measuring the outcome variables attitude and intention to not use *tik* were modelled on items from the often-used Risk Behavior Diagnosis (RBD) scale (Witte, undated; Witte et al., 1996; Witte et al, 2001). Attitude towards the recommended response was measured using a 5-point scale (1 = *do not feel strongly about at all* and 5 = *definitely feel strongly about*): "To never use *tik*, is something I..." (*Attitude 1*). Intention towards the recommended response was measured using a 5-point scale (1 = *strongly disagree* and 5 = *strongly agree*): "I plan to not use *tik* in the future" (*Intention 1*).

Researcher-designed items were used for measuring the outcome variables attitude and intention to speak to a family member who is involved with tik about their drug habit. These variables were measured as studies on the effects of interpersonal discussions of health messages suggest that talking to others such as peers, partners or parents could lead to changes in behavioural intentions (Busse, Fishbein, Bleakley, & Hennessy, 2010; Moyo, Lewandowski, MacPhail, Rees, & Pettifor, 2008; Reimuller, Hussong, & Ennet, 2011; Van den Putte, Yzer, Southwell, De Bruijn, & Willemsen, 2011; Weinman, Small, Buzi, & Smith, 2008). Attitude towards speaking to a family

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member or friend who is involved with *tik* about their drug habit was measured using a 5-point scale (1 = *do not feel strongly about at all* and 5 = *definitely feel strongly about*): "To speak to a family member or friend who is involved with tik about their drug habit, is something I…" (*Attitude 2*). Intention to speak to a family member or friend who is involved with *tik* about their drug habit was measured using a 5-point scale (1 = *strongly disagree* and 5 = *strongly agree*): "I plan to soon speak to a family member or friend who is involved with *tik* about their drug habit" (*Intention 2*).

4.2.3.2 Knowledge level related to *tik*

Knowledge level was measured by using seven researcher-designed items, which could be either true or false. The idea was to test knowledge of different types of dangers related to *tik*. Hence, the content of these items was strategically chosen so it would be a relatively even representation of the short-term physical effects, short-term psychological effects, long-term physical effects, and long-term psychological effects related to *tik* use. Each item was scored as 1 = correct or 0 = incorrect (no answer was also regarded as incorrect). The items which contained correct statements were "*Tik* causes you to look older than what you really are" (long-term physical effect), "*Tik* makes you aggressive" (short-term psychological effect), "*Tik* causes you to do irresponsible things" (short-term psychological effect), "*Tik* gives you bad teeth" (long-term physical effect), and "*Tik* causes you to imagine different things" (long-term psychological effect). The two items which were reverse scored as it contained false statements were "*Tik* causes you to think people are friendly and kind towards you" (long-term psychological effect; the correct answer is *tik* causes you to think people are antagonistic towards you) and "*Tik* decreases your sex drive" (short-term physical effect; the correct answer is *tik* causes an increase in your sex drive). As seven items were used to measure *knowledge level*, the total score may vary between 0 and 7. All the answers could be found in both the fotonovela and traditional brochure; compare Table 4.6.

4.2.3.3 Health message preference

A researcher-designed item was used for measuring the variable *health message preference*. After having read the health message from their own group and completing a related questionnaire, participants in the fotonovela group and the traditional brochure group were given the health message to read from the group they did not form part of. They were then asked to indicate which

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message they would prefer when reading a health message about *tik*. Participants could also respond by being neutral about which format they preferred. The actual question read "Verkies u om 'n boodskap oor *tik* in die vorm van 'n boekie soos *Spyt kom te laat* te lees, of eerder in die vorm van 'n brosjure soos *Tik – Hier is die Feite?*" (Do you prefer to read a message about *tik* in the form of a booklet such as *Spyt kom te laat*, or rather a brochure like *Tik – Hier is die Feite?*)

4.2.3.4 Narrative engagement variables

The items and scales used for the narrative engagement variables included were modelled on previous research by Cohen (2001) for identification, Green and Brock (2000) for transportation, and Moyer-Gusé and Nabi (2010) for counterarguing and perceived similarity. Perceived vulnerability and perceived susceptibility were treated as similar concepts (see perceived susceptibility below).

Identification with the two main characters (Ricardo and Anja) was measured using two items on a 5-point scale (1 = *strongly disagree* and 5 = *strongly agree*) for each character. It was decided not to include items for identification related to the other main character, Percy, who portrayed the antagonist in the story. The two items for measuring identification with the Ricardo character were "I think I understand what type of person Ricardo is", and "I felt I knew exactly what Ricardo was going through in the story". The Cronbach's alpha value for these two items turned out to be low (.45). [29] It was therefore decided to treat these two items separately as *Identification Ricardo 1* and *Identification Ricardo 2*. The two items for measuring *identification* with the Anja character were "I think I understand what type of person Anja is" and "I felt I knew exactly what Anja was going through in the story" (Cronbach's alpha = .67; referred to as *Identification Anja* from here on).

Transportation was measured using two items on a 5-point scale (1 = *strongly disagree* and 5 = *strongly agree*). The two items were "I wanted to learn how the narrative ended" (*Transportation 1*), and "While I was reading the narrative, I was only thinking about events in the narrative" (*Transportation 2*). The Cronbach's alpha value for these two items turned out to be low

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[29] A Cronbach's alpha value of .60 is deemed passable (George & Mallery, 2003).

(Cronbach's alpha =.51). It was decided to treat these two items separately as *Transportation 1* and *Transportation 2*.

Participants responded to one item measuring *Counterarguing* on a 5-point scale (1 = *strongly disagree* and 5 = *strongly agree*), namely "While I was reading the story, I agreed with what was happening in the story" (reverse scored).

Perceived similarity with the two main characters (Ricardo and Anja) was measured using two items on a 5-point scale (1 = *strongly disagree* and 5 = *strongly agree*) for each character. The two items for measuring perceived similarity with the Ricardo character were "Ricardo thinks the same way I think", and "Ricardo resembles me" (Cronbach's alpha = .78; referred to as *Perceived similarity Ricardo* from here on). The two items for measuring perceived similarity with the Anja character were "Anja thinks the same way I think", and "Anja resembles me" (Cronbach's alpha = .83; referred to as *Perceived similarity Anja* from here on). It was decided not to include items for perceived similarity related to the other main character, Percy, as he portrayed the antagonist in the story.

4.2.3.5 Fear appeal variables

Items and scales for measuring fear appeal variables perceived threat (average score of perceived susceptibility and perceived severity) and perceived self-efficacy were modelled on items from the RBD scale (Witte, undated; Witte et al., 1996; Witte et al., 2001). Participants responded to one item each measuring perceived susceptibility and perceived severity on a 5-point scale (1 = *strongly disagree* and 5 = *strongly agree*). To measure *Perceived susceptibility*, participants responded to the item: "It is possible that I might use *tik* in the future." To measure *Perceived severity*, participants were asked to indicate how much they agreed with the item: "I believe the harmful consequences of *tik* use is a severe health problem". Participants responded to two items measuring perceived self-efficacy (i.e. beliefs about the ability to perform the recommended response to effectively avert the threat of *tik* from occurring) on a 5-point scale (1 = *strongly disagree* and 5 = *strongly agree*). The *Perceived self-efficacy* items were the following. "I can easily abstain from using *tik*", and "I can easily say no to somebody who offers me *tik*" (Cronbach's alpha = .61).

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Another component of a fear appeal that is often included as a variable in fear appeal theories, perceived response efficacy (the degree to which the recommended response effectively averts the threat), was not measured in this study. It was felt it made little sense to ask respondents to indicate the degree to which they perceived the recommended response, namely simply saying no to *tik* to effectively avert threat of *tik*. It was presumed that perceived response efficacy would be high in any case.

One of the items and its scale to measure fear was adopted from previous research by Dillard and Shen (2007).[30] This item was measured on a 5-point scale (1 = *strongly disagree* and 5 = *strongly agree*), "I felt scared while reading the story". Given that fear appeal characteristics were included as part of the fotonovela in order to arouse fear, two additional items to measure fear aroused as a result of the message content and plot were developed by the researcher. These two items specifically related to the health information about *tik* were included as part of the plot. These two items were measured on a 5-point scale (1 = *strongly disagree* and 5 = *strongly agree*), "I felt scared when I read about the dangers of *tik* (e.g. it can cause damage to the brain, sores and lesions, etc.)," and "I felt scared when I read about the negative things that happened to Ricardo because he smoked *tik*." The Cronbach's alpha score for *Fear* was .71.

4.2.3.6 Other emotions (in addition to fear)

Items and scales for measuring surprise, sadness, and anger were adopted from previous research by Dillard and Shen (2007).[31] The item and its scale for measuring compassion were modelled on a similar item used by Myrick and Oliver (2015). As explained in Chapter 1, surprise, sadness, and anger were selected as most theorists agree that these emotions constitute basic, fundamental and distinct human emotions (see e.g. Dillard et al. 1996; Ekman, 2000; Hamann, 2012; Izard, 1977; Lazarus, 1991; Meyer, Niepel, Rudolph & Schützwohl, 1991; Nabi, 2002b; Oatley & Jenkins, 1992; Plutchik, 1980; Reisenzein, 2000; Smith & Lazarus, 1993). In addition, the emotion of

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[30] The RBD scale (Witte, undated; Witte et al., 1996; Witte et al., 2001) could not be used in this case as it does not include items for measuring fear.

[31] Dillard and Shen (2007) used different items to measure each of these emotions (p.331). It was decided to use the item for each emotion which resembled the name of the actual emotion, i.e. *surprised*, *sad*, and *angry*.

compassion has received recent attention for its possible persuasive effects (Myrick and Oliver, 2015; Oliver et al., 2012) and henceforth it was decided to also focus on this emotion.

Surprise was measured using one item on a 5-point scale (1 = *strongly disagree* and 5 = *strongly agree*). The item was "I felt surprised while reading the story". *Sadness* was measured using one item on a 5-point scale (1 = *strongly disagree* and 5 = *strongly agree*). The item was "I felt sad while reading the story". *Anger* was measured using one item on a 5-point scale (1 = *strongly disagree* and 5 = *strongly agree*). The item was "I felt angry while reading the story". *Compassion* was measured using one item on a 5-point scale (1 = *strongly disagree* and 5 = *strongly agree*). The item was "I felt compassionate while reading the story".

4.2.4 Procedure

The following procedure was followed at the various data collection sites. The researcher explained to participants what the study was about, after which written informed consent was obtained. Participants were then randomly divided into three groups (fotonovela group, traditional brochure group, and control group). See Table 4.7. Each participant was given an envelope containing either the fotonovela and accompanying questionnaire, traditional brochure and accompanying questionnaire, or a questionnaire only (control group). Participants who received either the fotonovela or traditional brochure were asked to take their time to read the health document first. They were instructed to return the health document to the researcher or field worker before completing the accompanying questionnaire. As mentioned, participants in the fotonovela group and the traditional brochure group were then given the health message from the group they did not form part of to read in order to complete the question about which health message they preferred. Participants in the control group were also asked to take their time in reading and completing the questionnaire.[32] All questionnaires were collected immediately afterwards.

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[32] After data collection was completed, participants in the control group were afforded the opportunity to read the fotonovela and the traditional brochure if they wished to do so, although this did not form part of the study.

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TABLE 4.7
Numbers of participants at the various data collection sites in the different conditions[33]

Data Collection Site	Condition			Total
	Fotonovela	Traditional Information Brochure	Control Group	
Swellendam	19	17	15	51
Bredasdorp	20	6	7	33
Ceres/Prince Alfred Hamlet	26	40	20	86
Calvinia	45	44	44	133
Total	110	107	86	303

4.2.5 Analyses

To answer the various research questions and hypotheses, statistical procedures included determining descriptive statistics, calculating correlation coefficients, and conducting univariate analyses (ANOVAs), a multivariate analysis (MANOVA), univariate chi-square analyses, linear regression analyses, and mediation analyses.

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[33] Although a concerted effort was made at each of the sites to divide participants into evenly sized groups for each condition, it was not always practically possible. In both Bredasdorp and Ceres/Prince Alfred Hamlet, some participants did not want to move away from sitting with their friends, while there were also latecomers at both sites who simply joined the groups closest to the entrance of the different halls due to spacing/seating restrictions.

4.3 Results

4.3.1 The effects of the three conditions on knowledge level (RQ1)

This section reports the findings related to the first part of **RQ1**: To what extent does reading a fotonovela about *tik* influence the knowledge level of Coloured people in the Western Cape as compared to reading a more traditional brochure about this topic?

TABLE 4.8
Means and standard deviations for *knowledge level* in the different conditions (all variables measured on a 7-point scale)

	Condition			Total
	Fotonovela	Traditional Information Brochure	Control Group	
Outcome Variable				
	M (*SD*)	*M* (*SD*)	*M* (*SD*)	*M* (*SD*)
Knowledge Level	5.83 (1.20)	5.81 (1.07)	5.59 (0.92)	5.75 (1.08)
	(*n* = 110)	(*n* = 107)	(*n* = 86)	(N = 303)

Table 4.8 shows the means and standard deviations pertaining to *Knowledge level* for the three message conditions. A one-way ANOVA was conducted to test the effect of *Condition* (fotonovela, traditional brochure, and no message control group) on *Knowledge level*. No significant effect of *Condition* on *Knowledge level* was found ($F < 1$). Closer inspection of the percentages of correct scores for each of the individual knowledge questions revealed a possible ceiling effect for Questions 1, 2, 4, 5, and 7 (see Table 4.9). It was therefore decided to focus on Questions 3 and 6, and to create a new knowledge variable, *Knowledge level (Q3 and Q6)*.

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TABLE 4.9

Numbers and percentages of correct and incorrect responses for the knowledge questions in the different conditions

Knowledge Variables			Condition			Total
			Fotonovela ($n = 110$)	Traditional Information Brochure ($n = 107$)	Control Group ($n = 86$)	
1. *Tik* makes you look older than you really are	Correct	%	96.4	93.5	95.3	95.0
		Count	(106)	(100)	(82)	(288)
	Incorrect	%	3.6	6.5	4.7	5.0
		Count	(4)	(7)	(4)	(15)
2. *Tik* makes you aggressive	Correct	%	96.4	97.2	97.7	97.0
		Count	(106)	(104)	(84)	(294)
	Incorrect	%	3.6	2.8	2.3	3.0
		Count	(4)	(3)	(2)	(9)
3. *Tik* makes you think people are friendly and kind towards you	Correct	%	66.4	62.6	50.0	60.4
		Count	(73)	(67)	(43)	(183)
	Incorrect	%	33.6	37.4	50.0	39.6
		Count	(37)	(40)	(43)	(120)
4. *Tik* makes you do irresponsible things	Correct	%	97.3	97.2	96.5	95.0
		Count	(107)	(104)	(83)	(288)
	Incorrect	%	2.7	2.8	3.5	3.0
		Count	(3)	(3)	(3)	(9)
5. *Tik* gives you bad teeth	Correct	%	96.4	91.6	96.5	94.7
		Count	(106)	(98)	(83)	(287)
	Incorrect	%	3.6	8.4	3.5	5.3
		Count	(4)	(9)	(3)	(16)
6. *Tik* decreases your sex drive	Correct	%	37.3	44.9	30.2	38.0
		Count	(41)	(48)	(26)	(115)
	Incorrect	%	62.7	55.2	69.8	62.0
		Count	(69)	(59)	(60)	(188)
7. *Tik* makes you imagine different things	Correct	%	93.6	94.4	93.0	93.7
		Count	(103)	(101)	(80)	(284)
	Incorrect	%	6.4	5.6	7.0	6.3
		Count	(7)	(6)	(6)	(19)
Grand Total	Correct	%	83.4	83.01	79.8	
		Count	(642)	(622)	(481)	
	Incorrect	%	16.6	16.9	20.2	
		Count	(128)	(127)	(122)	

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TABLE 4.10
Means and standard deviations for *knowledge level (Q3 and Q6)* in the different conditions (all variables measured on a 3-point scale: 0, 1, or 2)

| | Condition | | | |
Outcome Variable	Fotonovela	Traditional Information Brochure	Control Group	Total
	M (*SD*)	*M* (*SD*)	*M* (*SD*)	*M* (*SD*)
Knowledge Level (Q3 and Q6)	1.03 (0.80)	1.07 (0.76)	0.80 (0.77)	0.98 (0.78)
	(*n* = 110)	(*n* = 107)	(*n* = 86)	(N = 303)

Table 4.10 shows the means and standard deviations pertaining to *Knowledge level (Q3 and Q6)* for the three conditions. A one-way ANOVA was conducted, with *Condition* as the independent variable and *Knowledge level (Q3 and Q6)* as the dependent variable.

A significant effect for *Condition* on *Knowledge level (Q3 and Q6)* was found [$F(2,300) = 3.29$, $p = .038$, $\eta^2 = .015$]. Post hoc analysis (LSD) showed that the mean score for *Knowledge level (Q3 and Q6)* was significantly higher for respondents in the fotonovela condition ($M = 1.03$; $SD = 0.80$) compared to respondents in the control condition ($M = 0.80$; $SD = 0.77$) and that the mean score for *Knowledge level (Q3 and Q6)* was significantly higher for respondents in the traditional brochure condition ($M = 1.07$; $SD = 0.76$) compared to respondents in the control condition ($M = 0.80$; $SD = 0.77$). There was no significant difference in the mean score for *Knowledge level (Q3 and Q6)* between respondents in the fotonovela condition and respondents in the traditional brochure condition.

In summary, both health documents, when compared to the control condition, had a significant positive effect on knowledge level for those questions that did not show ceiling effects. However, when comparing the knowledge level of respondents who had read the fotonovela with the knowledge level of respondents who had read the traditional brochure, no significant difference was found. The answer to the first part of **RQ1** then is that reading this fotonovela about *tik* did

not result in knowledge gain to be significantly different when compared to reading a more traditional brochure about this topic.

4.3.2 The effects of the three conditions on attitudes and intentions (RQ1)

This section reports the findings related to the second part of **RQ1**: To what extent does reading a fotonovela about *tik* influence the behavioural attitudes and behavioural intentions of Coloured people in the Western Cape as compared to reading a more traditional brochure about this topic?

TABLE 4.11
Means and standard deviations for attitudes and intentions in the different conditions (all variables measured on a 5-point scale)

Outcome Variable	Condition			Total
	Fotonovela	Traditional Information Brochure	Control Group	
	M (*SD*)	*M* (*SD*)	*M* (*SD*)	*M* (*SD*)
Attitude 1 – towards never using *tik*	4.27 (1.29)	4.03 (1.52)	4.34 (1.08)	4.21 (1.32)
	(*n* = 103)	(*n* = 91)	(*n* = 76)	(N = 270)
Attitude 2 - towards speaking to a family member or friend who is involved with *tik* about their drug habit	3.92 (1.31)	3.98 (1.16)	4.21 (1.05)	4.02 (1.19)
	(*n* = 103)	(*n* = 91)	(*n* = 76)	(N = 270)
Intention 1 – to not use *tik* in the future	4.28 (1.27)	4.11 (1.39)	4.17 (1.37)	4.19 (1.34)
	(*n* = 103)	(*n* = 91)	(*n* = 76)	(N = 270)
Intention 2 – to speak to a family member or friend who is involved with *tik* about their drug habit	4.24 (0.76)	3.75 (1.26)	3.99 (1.16)	4.00 (1.08)
	(*n* = 103)	(*n* = 91)	(*n* = 76)	(N = 270)

Table 4.11 shows the means and standard deviations for attitudes and intentions. A one-way MANOVA was conducted to test the effect of *Condition* (fotonovela, traditional brochure, and no message control group) on *Outcomes* (*Attitude 1*, *Attitude 2*, *Intention 1*, and *Intention 2*). There was a statistically significant effect of *Condition* on *Outcomes* (*Attitude 1*, *Attitude 2*, *Intention 1*, and *Intention 2*), F (8, 528) = 2.37, p = .016, η^2 = .035. Post hoc analysis (LSD) showed that the mean score for *Intention 2* was significantly higher for respondents in the fotonovela condition (*M* = 4.24; *SD* = 0.76) compared to respondents in the traditional brochure condition (*M* = 3.75; *SD* = 1.26). There was no significant difference for respondents in the fotonovela condition compared to the control condition for *Intention 2*. There was also no significant difference for respondents in the traditional brochure condition compared to the control condition for *Intention 2*. No significant effects of condition on *Attitude 1*, *Attitude 2*, and *Intention 1* were found.

In summary, although some differences were found, comparisons with regard to respondents' attitudes and intentions did not yield conclusive evidence in terms of either one of the fotonovela or traditional brochure being superior to the other, or when comparing either one of the two health documents to the control condition. The answer to the second part of **RQ1** then is that reading this fotonovela about *tik* did not result in attitudes and behavioural intentions to be significantly different when compared to reading a more traditional brochure about this topic.

4.3.3 The associations between narrative engagement variables and differences in attitudes and intentions of readers of the fotonovela (H1 – H4)

In order to test whether narrative engagement variables (transportation, identification, perceived similarity, perceived vulnerability, and counterarguing) were associated with participants' differences in attitudes and intentions, the tenets of the EORM served as guidance. Henceforth, the following EORM propositions, formulated as hypotheses 1 – 4, were tested:

H1: *Identification* is associated with *counterarguing*, which in turn is associated with story-consistent (a) behavioural attitudes and (b) behavioural intentions.

H2: *Identification* is associated with *perceived vulnerability*, which in turn is associated with story-consistent (a) behavioural attitudes and (b) behavioural intentions.

H3: *Transportation* is associated with *counterarguing*, which in turn is associated with story-consistent (a) behavioural attitudes and (b) behavioural intentions.

H4: *Perceived similarity* is associated with *perceived vulnerability*, which in turn is associated with story-consistent (a) behavioural attitudes and (b) behavioural intentions.

To test hypotheses 1- 4, as the first step correlation coefficients were calculated to find possible associations between the narrative engagement variables *Identification Ricardo 1, Identification Ricardo 2, Identification Anja, Transportation 1*, *Transportation 2, Perceived similarity Ricardo,* and *Perceived similarity Anja*, on the one hand, and the outcome variables *Attitude 1, Attitude 2, Intention 1,* and *Intention 2*, on the other. See Table 4.12 for the correlation coefficients.

TABLE 4.12
Means, standard deviations and Pearson correlations associated with narrative engagement and outcome variables for participants in the fotonovela condition

Measure	Ident. Ric. 1	Ident. Ric. 2	Ident. Anja	Transp. 1	Transp. 2	Per. Sim. Ric.	Per. Sim. Anja	Count.	Per. Vul.	Att. 1	Att. 2	Int. 1	Int. 2
M	3.87	3.72	4.07	4.45	4.09	2.49	3.93	2.48	1.79	4.21	3.94	4.28	4.25
SD	1.05	1.21	0.90	0.65	1.0	1.25	1.09	1.41	1.29	1.35	1.29	1.26	0.76
Identification Ricardo 1	1												
Identification Ricardo 2	.288**	1											
Identification Anja	.327**	.421**	1										
Transportation 1	.221*	.074	.374**	1									
Transportation 2	.151	.124	.156	.374**	1								
Perceived Similarity Ricardo	.100	.213	.229	-.011	.176	1							
Perceived Similarity Anja	.315**	.264*	.426**	.057	.225	.435**	1						
Counterarguing	.038	.107	-.011	.145	.135	.226	-.094	1					
Perceived Vulnerability	.201*	.226*	.113	-.004	.079	.159	.108	-.116	1				
Attitude 1	.189	.064	.188	.244*	.083	.029	.082	-.010	-.023	1			
Attitude 2	-.111	-.004	.111	.145	.019	.118	.203	.016	.077	.211*	1		
Intention 1	.019	.112	.118	.057	-.025	-.061	.352**	-.131	.015	.381**	.148	1	
Intention 2	.065	.056	.152	.188	-.010	.102	.117	.079	.042	.153	.378**	.095	1

Note. The number of cases for the outcome variables were *Attitude 1* (*n* = 109), *Attitude 2* (*n* = 109), *Intention 1* (*n* = 109), and *Intention 2* (*n* = 105).
* $p < .05$ ** $p < .01$

As Table 4.12 shows, significant and positive correlations relevant to hypotheses 1- 4 were found between (a) *Transportation 1* and *Attitude 1* ($r = .244$; $p < .05$), and between (b) *Perceived similarity Anja* and *Intention 1* ($r = .352$; $p < .01$).[34]

Mediation analyses were then performed in order to determine the extent to which the significant correlation found between *Transportation 1* and *Attitude 1* was mediated by *Counterarguing*, as was to be expected according to the EORM, and the extent to which the significant correlation found between *Perceived similarity Anja* and *Intention 1* was mediated by *Perceived vulnerability*, also as was to be expected according to the EORM. In each of the mediation analyses, first the total effect of variable X on variable Y was determined.[35] If variable X was significantly associated with variable Y, the two components of the total effect were assessed. Firstly, the indirect effect (a x b) through M was determined (to what extent is X associated with Y through mediator variable M?), and, secondly, the direct effect (c') was determined (to what extent is X associated with Y independently from M)?[36] See Figure 4.1.

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[34] Significant correlations between variables reflected in Table 4.12, which were not part of hypotheses 1- 4, were not further scrutinized in the current study. The significant correlations found between the outcome variables *Attitude 1* and *Intention 1*, and *Attitude 2* and *Intention 2* are discussed in Section 4.3.6.

[35] The researcher is aware that the terms 'total effect', 'indirect effect' and 'direct effect' may suggest a causal relationship between the variables involved, while strictly speaking the regression analyses that the mediation analyses are based on do not permit for cause-effect conclusions. In the literature on mediation analyses, however, it is conventional to use this 'total effect', 'indirect effect' and 'direct effect' terminology (see e.g. Hayes, 2009, 2013).

[36] Even when there is no significant total effect of X on Y, there may be an indirect effect of X on Y, for instance if one or more indirect paths carry the effect and those paths operate in opposite directions (Hayes, 2009, pp. 413-414). In this study, however, the researcher was only interested in the possible decomposition of a total effect if such a total effect actually proved to exist, that is if narrative engagement variables proved to be significantly associated with attitudes or intentions.
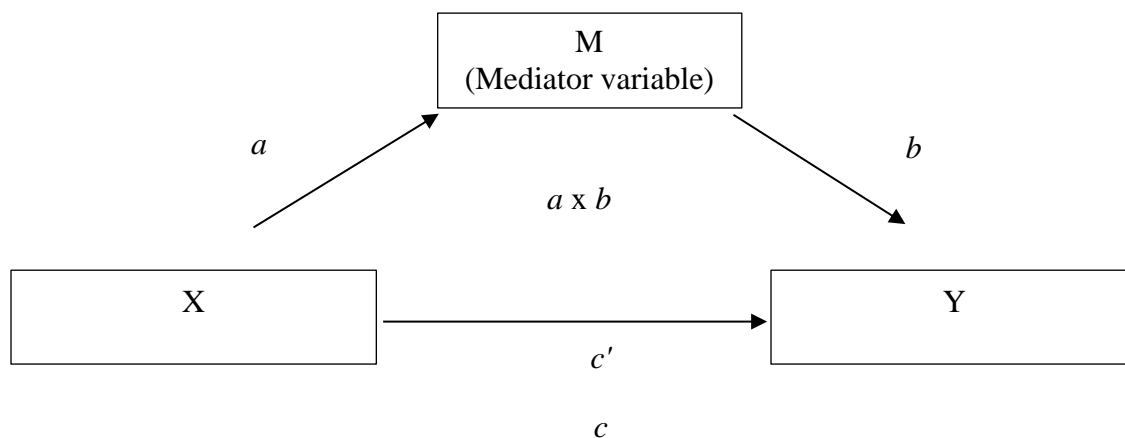
a x *b*: indirect effect

c': direct effect

c: total effect

FIGURE 4.1. Simple mediation model (see Hayes, 2013, pp. 85-122).

TABLE 4.13
Outcomes of the mediation analyses

	Total effect	Direct effect	Indirect effect
Transportation 1 and *Attitude 1*, through *Counterarguing*	.51**	.53**	-.01 (*ns*)
Perceived similarity Anja and *Intention 1*, through *Perceived Vulnerability*	.40**	.39**	.00 (*ns*)

** *p* < .01[37]
ns = not significant

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[37] The macro used to test the simple mediation model does not provide p-values for indirect effects. According to Hayes (2013), however, if the 95% confidence interval (CI) for the indirect effect does not contain and is entirely above zero, there is clear evidence that the indirect effect is positive to a statistically significant degree. Conversely, if the 95% CI does not contain and is entirely below zero, there is clear evidence that the indirect effect is negative to a statistically significant degree (p. 109). For reasons of brevity, we use the expression 'significant' in such cases.

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Table 4.13 presents the outcomes of the mediation analyses. In both cases where significant associations were found between (a) *Perceived similarity Anja* and *Intention 1* and between (b) *Transportation 1* and *Attitude 1*, a significant direct effect was found, but no indirect effect. Mediation analysis was also performed in order to determine the extent to which the significant correlation found between *Perceived similarity Anja* and *Intention 1* was mediated by *Perceived vulnerability*, for male and female participants' seperately. A significant total and positive effect ($c = .47$; $p < .01$), a significant direct and positive effect ($c' = .41$; $p < .01$), and an indirect effect ($ab = .06$) that was positive to a statistically significant degree were found for female participants. No significant effects were found for male participants.

In summary, the data did not provide support to suggest that differences found in attitudes and intentions of readers of the fotonovela could be explained by pathways proposed by the EORM. The analyses of the data therefore did not support **H1** – **H4**. However, for female participants an association was found between perceived similarity with the female character (Anja) and intention to not use *tik* as mediated by perceived vulnerability. Future researchers may wish to investigate possible associations between gender, narrative engagement variables such as *perceived similarity*, and the persuasive effects of reading a fotonovela. Given the significant correlations found between different narrative engagement variables in the current study (see Table 4.12), future researchers may likewise wish to investigate the implications of possible associations between narrative engagement variables for message persuasiveness. The significant and positive correlation found between *Perceived similarity Anja* and *Perceived similarity Ricardo* ($r = .435$; $p < .01$) may be of particular interest here. This outcome may be considered as a surprise, as the character depictions and story arcs of these two characters were very different. Compare, for instance, Moyer-Gusé and Nabi (2010, pp. 29-30) who refer to *perceived similarity* as measuring how much a person perceives him/herself to have in common with a character in their real life.

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4.3.4 The associations between fear appeal variables and differences in attitudes and intentions of readers of the fotonovela (H5 and H6)

In order to test whether the fear appeal variables (perceived threat, perceived self-efficacy, and fear) were associated with participants' differences in attitudes and intentions, the tenets of the EPPM served as guidance. The following EPPM propositions, formulated as hypotheses 5 and 6, were tested:

H5: If perceived efficacy is high, perceived threat is associated with (a) behavioural attitudes and (b) behavioural intentions.

H6: If perceived efficacy is high, the associations of fear and (a) behavioural attitudes and (b) behavioural intentions are mediated by perceived threat.

As explained earlier in this chapter, this study only focussed on perceived self-efficacy. Hence, perceived self-efficacy was used instead of perceived efficacy to test the abovementioned propositions. As the EPPM only focusses on personal health behaviour and not on interpersonal discussions of health messages, only *Attitude 1* and *Intention 1*, i.e. attitude and intention related to *tik* use, were considered here. Scores ≥4 on a 5-point scale for *Perceived self-efficacy* measured as mean score for reactions to the items "I can easily abstain from using *tik*" and "I can easily say no to somebody who offers me *tik*" (see Section 4.2.3.5) were considered as high. In total, 76 out of 109 participants in the fotonovela condition had a *Perceived self-efficacy* score of ≥4.

TABLE 4.14
Means and standard deviations for the fear appeal variables and the outcome variables in cases where *Self-efficacy* ≥4 for participants in the fotonovela condition (all variables measured on a 5-point scale)

Variable	*M* (*SD*)
Threat	3.18 (0.82)
Self-efficacy	4.69 (0.40)
Fear	4.06 (0.76)
Attitude 1	4.45 (1.08)
Intention 1	4.39 (1.16)

Note. Following the tenets of the EPPM, threat was calculated as the average score of perceived susceptibility and perceived severity (Witte, undated; Witte et al., 2001).

TABLE 4.15
Pearson correlations between *Threat*, *Fear*, and outcome variables for participants in the fotonovela condition (in cases where *Self-efficacy* ≥4)

Measure	Threat	Fear	Attitude 1	Intention 1
Threat	1			
Fear	.133	1		
Attitude 1	.226*	-.092	1	
Intention 1	.123	.169	.392**	1

* *p* < .05 ** *p* < .01

Table 4.14 shows the means and standard deviations of the fear appeal variables (*Perceived threat*, *Perceived self-efficacy*, and *Fear*) and the outcome variables (*Attitude 1* and *Intention 1*) for the participants who had a *Perceived self-efficacy* score of ≥4. Table 4.15 shows the correlation coefficients between *Perceived threat*, on the one hand, and *Attitude 1* and *Intention 1*, on the other

hand, in cases where *Perceived self-efficacy* was high (i.e. scores ≥4 on a 5-point scale). A positive and significant correlation was found between *Perceived threat* and *Attitude 1* ($r = .226$; $p < .05$).[38]

TABLE 4.16
Outcomes of mediation analyses for the fear appeal variables

	Total effect	Direct effect	Indirect effect
Fear and *Attitude 1*, through *Perceived Threat*	-.12	-.16	.04
	(*ns*)	(*ns*)	(*ns*)
Fear and *Intention 1*, through *Perceived Threat*	.19	.16	.03
	(*ns*)	(*ns*)	(*ns*)

ns = not significant

To determine whether *Perceived threat* was a mediator in the association between *Fear*, on the one hand, and *Attitude 1* and *Intention 1*, on the other, mediation analyses were performed.[39] As Table 4.16 shows, no significant total direct or indirect effects were found.

To sum up: In accordance with what the EPPM suggests, perceived threat was associated with a positive attitude towards not using *tik* in cases where perceived self-efficacy was high, which partially supports **H5**. Contrary to what the EPPM proposes, no support was found for perceived threat as mediator in the association between fear and behavioural attitudes and intentions. Hence, **H6** is not supported.

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[38] The significant correlation found between the outcome variables *Attitude 1* and *Intention 1* in Table 4.15 is discussed in Section 4.3.6.

[39] A similar procedure for mediation analysis as described in Section 4.3.3 was followed.

4.3.5 The associations between other emotions in addition to fear and differences in attitudes and intentions of readers of the fotonovela (H7– H10) [40]

In order to test whether the emotions surprise, anger, sadness, and compassion were associated with participants' differences in attitudes and intentions, the following hypotheses were tested:

H7: Surprise is associated with (a) behavioural attitudes and (b) behavioural intentions.

H8: Sadness is associated with (a) behavioural attitudes and (b) behavioural intentions.

H9: Anger is associated with (a) behavioural attitudes and (b) behavioural intentions.

H10: Compassion is associated with (a) behavioural attitudes and (b) behavioural intentions.

To test hypotheses 7- 10, as the first step correlation coefficients were calculated to find possible associations between the emotions *Fear*, *Surprise*, *Sadness*, and *Compassion*, on the one hand, and the outcome variables *Attitude 1, Attitude 2, Intention 1,* and *Intention 2*, on the other. See Table 4.17 for the correlation coefficients.

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[40] Although the associations between *Fear* and outcome variables were determined as part of testing H5 and H6, it was decided to include *Fear* in these analyses as well.

TABLE 4.17

Means, standard deviations and Pearson correlations associated with emotions and outcome variables for participants in the fotonovela condition

Measure	Fear	Surprise	Anger	Sadness	Compassion	Att. 1	Att. 2	Int. 1	Int. 2
M	4.03	3.80	3.13	3.86	3.58	4.21	3.94	4.28	4.25
SD	0.82	1.11	1.48	1.17	1.21	1.35	1.29	1.26	0.76
Fear	1								
Surprise	.472**	1							
Anger	.128	.106	1						
Sadness	.337**	.170	.285**	1					
Compassion	.038	.046	.379**	.588**	1				
Attitude 1	.036	-.157	.111	.011	.162	1			
Attitude 2	.126	.058	.255**	.238*	.355**	.211*	1		
Intention 1	.134	.008	.135	.158	.069	.381**	.148	1	
Intention 2	.272**	.112	.168	.432**	.204*	.153	.378**	.095	1

* p < .05 ** p < .01

As Table 4.17 shows, positive and significant correlations relevant to hypotheses 7- 9 were found between (a) *Anger* and *Attitude 2* ($r = .255$; $p < .01$), (b) *Sadness* and *Attitude 2* ($r = .238$; $p < .05$), (c) *Compassion* and *Attitude 2* ($r = .355$; $p < .01$), (d) *Fear* and *Intention 2* ($r = .272$; $p < .01$), (e) *Sadness* and *Intention 2* ($r = .432$; $p < .01$), and (f) *Compassion* and *Intention 2* ($r = .204$; $p < .05$).[41]

Linear regression analyses were performed next, in order to find possible relations between *Fear, Surprise, Anger, Sadness,* and *Compassion* entered as predictor variables and *Attitude 1* (attitude

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[41] Significant correlations between emotions reflected in Table 4.17 were not further scrutinized in the current study. The significant correlations found between the outcome variables *Attitude 1* and *Intention 1*, and *Attitude 2* and *Intention 2* are discussed in Section 4.3.6.

towards *tik* use), *Attitude 2* (attitude towards speaking to a family member or friend who is involved with *tik* about their drug habit), *Intention 1* (intention towards *tik* use), and *Intention 2* (intention towards speaking to a family member or friend who is involved with *tik* about their drug habit) entered as dependent variables. Neither *Fear,* nor *Surprise, Anger, Sadness,* or *Compassion* were found to be significant predictors of *Attitude 1* ($R^2 = .086$; $p = .130$). In the regression analysis with *Attitude 2* as dependent variable ($R^2 = .150$; $p = .008$), only *Compassion* ($\beta = .334$; $p = .008$) was found to be a significant (and positive) predictor. Neither *Fear,* nor *Surprise, Anger, Sadness,* or *Compassion* were found to be significant predictors of *Intention 1* ($R^2 = .035$; $p = .627$). In the regression analysis with *Intention 2* as dependent variable ($R^2 = .180$; $p = .002$), only *Sadness* ($\beta = .350$; $p = .007$) was found to be a significant (and positive) predictor.

In summary, limited support was forthcoming from the data to suggest that differences found in attitudes and intentions of readers of the fotonovela could be explained by the arousal of *anger* and *surprise*. The analyses of the data therefore did not support **H7** and **H9**. However, *sadness* and *compassion* were found to be significant (and positive) predictors of intention and attitude toward speaking to a family member or friend who is involved with tik about their drug habit, respectively. Hence, the analyses of the data partially supported **H8** and **H10**. Significant correlations were found between different emotions in the current study (see Table 4.17). Future researchers may wish to investigate the implications of possible associations between different emotions evoked for message persuasiveness.

4.3.6 The associations between attitudes, intentions, and knowledge level for all participants and for each condition (H11)

In order to test possible associations between behavioural attitudes, behavioural intentions, and knowledge level, the tenets of the IMBP served as guidance. According to the IMBP (Fishbein & Ajzen, 2010), attitude is a function of behavioural beliefs (i.e. beliefs about the likelihood that performing a behaviour will have certain outcomes) and attitude is ultimately a determinant of intention (Yzer, 2012). As in the current study the answers to the knowledge questions related to the outcomes associated with using *tik* may perhaps be regarded as indicative for behavioural beliefs, the level of this knowledge could be expected to be positively associated with attitude. Hence, the current study also tested for the possibility of such an association. The following IMBP proposition, formulated as hypothesis 11, was tested:

H11: Behavioural attitude is associated with behavioural intention and with knowledge level.

In order to test the associations between knowledge level, behavioural attitudes, and behavioural intentions, correlation coefficients were calculated between the variables *Knowledge level (Q3 and Q6), Attitude 1*, *Attitude 2*, *Intention 1*, and *Intention 2*. [42] Correlation coefficients were calculated for all participants, as well as in the three conditions separately (fotonovela, traditional brochure, and no message control group). See Tables 4.18 – 4.21 for the mean scores, standard deviations, and the correlation coefficients.

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[42] As mentioned earlier, the original *Knowledge level* variable for all items was not considered as the percentages of correct scores for each of the individual knowledge questions revealed a possible ceiling effect for Questions 1, 2, 4, 5, and 7.

TABLE 4.18
Means, standard deviations, and Pearson correlations associated with *Knowledge level (Q3 and Q6)* and outcome variables for all participants

Measure	Know. Level (Q3 and Q6)	Att. 1	Att. 2	Int. 1	Int. 2
M	0.98	4.12	4.03	4.16	4.00
SD	0.79	1.39	1.19	1.35	1.09
N	303	294	296	296	282
Knowledge level (Q3 and Q6)	1				
Attitude 1	.143*	1			
Attitude 2	.055	.219**	1		
Intention 1	.106	.359**	.148*	1	
Intention 2	.004	.115	.363*	.067	1

* *p* < .05 ** *p* < .01

TABLE 4.19
Means, standard deviations, and Pearson correlations associated with *Knowledge level (Q3 and Q6)* and outcome variables for the fotonovela condition

Measure	Know. Level (Q3 and Q6)	Att. 1	Att. 2	Int. 1	Int. 2
M	1.04	4.21	3.94	4.28	4.25
SD	0.80	1.35	1.29	1.26	0.76
n	110	109	109	109	105
Knowledge level (Q3 and Q6)	1				
Attitude 1	.206*	1			
Attitude 2	.174	.211**	1		
Intention 1	.024	.381**	.148	1	
Intention 2	.118	.153	.378**	.095	1

* *p* < .05 ** *p* < .01

TABLE 4.20

Means, standard deviations, and Pearson correlations associated with *Knowledge level (Q3 and Q6)* and outcome variables for the traditional brochure condition

Measure	Know. Level (Q3 and Q6)	Att. 1	Att. 2	Int. 1	Int. 2
M	1.07	3.93	4.00	4.02	3.75
SD	0.76	1.58	1.16	1.44	1.27
n	107	100	102	102	100
Knowledge level (Q3 and Q6)	1				
Attitude 1	.162	1			
Attitude 2	.000	.188	1		
Intention 1	.160	.329**	.152	1	
Intention 2	-.037	.020	.364**	.068	1

** *p* < .01

TABLE 4.21

Means, standard deviations, and Pearson correlations associated with *Knowledge level (Q3 and Q6)* and outcome variables for the control condition

Measure	Know. Level (Q3 and Q6)	Att. 1	Att. 2	Int. 1	Int. 2
M	0.80	4.24	4.19	4.15	3.99
SD	0.78	1.20	1.08	1.40	1.15
n	86	85	85	85	77
Knowledge level (Q3 and Q6)	1				
Attitude 1	.086	1			
Attitude 2	-.014	.284**	1		
Intention 1	.152	.368**	.160	1	
Intention 2	-.032	.217	.460**	.018	1

** *p* < .01

As Table 4.18 shows in the group of participants as a whole, a positive and significant correlation was found between *Knowledge Level (Q3 and Q6)* and attitude to not use *tik* (*Attitude 1*) ($r = .143$; $p < .05$). However, as Tables 4.19 – 4.21 show, a positive and significant correlation between *Knowledge Level (Q3 and Q6)* and attitude to not use *tik* (*Attitude 1*) was only in the fotonovela condition ($r = .206$; $p < .05$). Positive and significant correlations were found between (a) attitude and intention to not use *tik* (*Attitude 1* and *Intention 1*), and (b) attitude and intention to speak to a family member who is involved with tik about their drug habit (*Attitude 2* and *Intention 2*) for the group of participants as a whole as well as for all the different conditions specifically.

In summary, limited support was found for the associations between behavioural attitudes, behavioural intentions, and knowledge level. Positive and significant correlations were found between attitude and intention toward not using *tik* as well as between attitude and intention toward speaking to a family member or friend who is involved with *tik* about their drug habit, for the group of participants as a whole and for the three different conditions specifically. The level of knowledge was found to be significantly and positively associated with attitude toward not using *tik* for the group of participants as a whole and for the group in the fotonovela condition, but for the groups in the other conditions no such associations were found. Hence, the analyses of the data offer partial support for **H11**.

4.3.7 Preference for the fotonovela or traditional brochure (RQ2)

This section reports the findings related to **RQ2**: To what extent do Coloured people in the Western Cape prefer a fotonovela about *tik* to a more traditional brochure about this topic?

TABLE 4.22
Numbers and percentages of responses for health message preference

	Which message format do you prefer?			
	Fotonovela	Traditional Information Brochure	I am neutral	
Total % (Count)	60.6 (120)	31.3 (62)	8.1 (16)	100 (198)

As Table 4.22 shows, 198 respondents who were either part of the fotonovela condition or traditional brochure condition completed the question regarding health message preference. In total, 120 respondents (60.6%) preferred the fotonovela when reading a health message about *tik*, while 62 respondents (31.3%) preferred the traditional brochure, and 16 respondents (8.1%) were undecided. [43] In other words, results showed about twice as many respondents preferred to read health information about *tik* in fotonovela format as the other way round. A binomial test provided in SPSS indicated that the proportion of respondents of .66, who preferred the fotonovela was significantly higher than the expected .50, $p < .001$.[44] The answer to **RQ2** then is that people preferred to read a health message about *tik* in fotonovela format over a more traditional type information brochure.

In addition, chi-squares were calculated to find possible associations between *Health message preference,* on the one hand, and *Condition*, *Gender*, *Education level*, and *Age group*, on the other. No significant associations were found between *Health message preference*, on the one hand, and *Condition*, *Gender*, and *Education level*, on the other. A significant association was found between

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[43] There were 19 missing responses for this question.

[44] For the binomial test, the neutral scores for health message preference were omitted.

Health message preference and *Age group* χ^2 (4) = 13.56, *p* < .05 (See Table 4.23). The traditional brochure was preferred to the fotonovela in the 20-34 age group, while the fotonovela was preferred by participants in the other two age groups. Put differently, a clear preference was found for the fotonovela over the traditional brochure in the younger age group (19 years or younger) and in the older age group (35 and older).

TABLE 4.23
Health message preference over age group

Which message format do you prefer?	Age Group		
	≤19	20 – 34	≥35
	% (Count)	% (Count)	% (Count)
Fotonovela	60.7 (37)	43.1 (25)	73.7 (56)
Traditional Brochure	29.5 (18)	46.6 (27)	22.4 (17)
I am neutral	9.8 (6)	10.3 (6)	3.9 (3)
Total % (Count)	100 (61)	100 (58)	100 (76)

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4.4 Discussion of the results

The study described here evaluated the effects of the fotonovela *Spyt kom te laat* that was developed as discussed in Chapter 3. The evaluation entailed a randomized controlled trial that compared the effects of three different message conditions (a group who read the fotonovela, a group who read a traditional brochure, as well as a no message control group) in terms of respondents' knowledge level, attitudes and intentions in a between-groups experimental design. The study also presented possible explanations for the effects found of the fotonovela. This was done by determining to what extent the behavioural attitudes and behavioural intentions of readers of the fotonovela can be explained by (a) theoretical constructs related to narrative engagement (transportation, identification, perceived similarity, perceived vulnerability, and counterarguing), (b) theoretical constructs related to fear appeals (perceived threat, perceived self-efficacy, and fear), and (c) the arousal of other emotions in addition to fear (surprise, sadness, anger, and compassion). Moreover, the associations between behavioural attitudes, behavioural intentions, and knowledge level for all respondents and for each condition were investigated. The fotonovela was also evaluated by determining whether people would prefer the fotonovela about *tik* or a more traditional type of information brochure about this topic.

Comparisons in terms of respondents' knowledge level did not yield conclusive evidence in terms of either one of the two health documents being superior to the other. However, both health documents had a significant positive effect on knowledge level for those questions that did not show ceiling effects when compared to the control condition. Previous fotonovela studies reported similar results. That is, Duizer et al. (2014), Hernandez and Organista (2013), James et al. (2005), and Koops van't Jagt et al. (2017) found fotonovela group participants had significantly higher knowledge levels compared to control group participants. In addition, Duizer et al. and Koops van't Jagt et al. found that participants in the traditional brochure group had significantly higher knowledge levels compared to the control group participants. The results of the current study did not show knowledge gain in the fotonovela group to be significantly higher compared to the traditional brochure group. This result was different to the results in fotonovela studies by Duizer et al., Koops van't Jagt et al., and Unger et al. (2013) where a significant knowledge gain in the fotonovela group was found when compared to the traditional brochure group. A possible explanation here may be that the fotonovela and the traditional brochure were similar in terms of

content and quality, given the positive feedback received about both health documents from patients in the waiting room intervention study (see Chapter 5).

Means for behavioural attitudes and intentions for participants in the fotonovela, traditional brochure, and control condition were ≥ 3.75 on a 5-point scale. These relatively high scores may be a result of participants wishing to give answers deemed as socially acceptable, given that the specific issues probed were about using/not using *tik* and speaking/not speaking to a family member or friend who is involved with this substance about their drug habit. Attitudes and intentions after reading either one of the two health documents did not differ significantly when compared to scores in the control condition. In their fotonovela study, Koops van't Jagt et al. (2017) also found no significant differences between participants in the fotonovela condition compared to participants in the control condition for intentions. However, in the fotonovela studies by Duizer et al. (2014), Hernandez and Organista (2013), and James et al. (2005), participants in the fotonovela group outperformed participants in the control group for intentions. In addition, Duizer et al. also found that participants in the traditional brochure group outperformed participants in the control group for intentions. Comparisons in terms of respondents' attitudes and intentions also did not yield conclusive evidence in terms of either one of the two documents being superior to the other, although some differences were found. Intention towards speaking to a family member or friend who is involved with *tik* about their drug habit was found to be significantly higher for those respondents in the fotonovela condition compared to those respondents in the traditional brochure condition. This finding is different from findings in the fotonovela studies by Duizer et al. and Koops van't Jagt et al. In both these studies, no significant differences were found between the fotonovela group and the traditional brochure group for intentions.

Pathways proposed by the EORM were investigated in the fotonovela condition in order to help explain the possible effects found of narrative engagement on the attitudes and intentions of readers of the fotonovela. Similar to the findings in the fotonovela studies by Duizer et al. (2014) and Koops van't Jagt et al. (2017), the data did not provide support to suggest that the effects found could be explained by elements related to engagement with the narrative based on what the EORM would expect. Specifically, neither the current study nor the two studies mentioned above found support for the EORM predictions regarding an indirect effect of identification, transportation or

perceived similarity on message outcomes via counterarguing and/or perceived vulnerability. The current study did find a significant and positive direct effect of transportation on attitude towards not using *tik*. Duizer et al. also found a significant and positive direct effect for transportation on message outcomes (albeit on behavioural intention), while Koops van't Jagt et al. found a significant and positive total effect for transportation on behavioural intention (although no significant direct effect was found). Contrary to Duizer et al., however, the current study did not find any direct effects of identification on behavioural intention. The current study, moreover, found a significant and positive direct effect of perceived similarity with the Anja character on intention to not use *tik*. In summary, the positive and direct effects found for transportation and perceived similarity on behavioural attitude and intention toward not using *tik*, respectively, seem to be in line with the findings from previous research pertaining to the effects of narrative engagement in a fotonovela context. As in the previous fotonovela studies, this study found that the engagement aspect triggered by the narrative structure of E-E messages may contribute to message success.

The incorporation of fear appeal characteristics as part of the fotonovela seems to have been successful. Fear arousal was high (M = 4.03 on a 5-point scale; SD = 0.82), and perceived threat was associated with a positive attitude towards not using *tik* in cases where perceived self-efficacy was high. This finding is in accordance with what the EPPM suggests and it is similar to findings in other fear appeal studies where perceived threat was found to be associated with message outcomes in cases where perceived efficacy (perceived self-efficacy in this study) was high (Roberto & Goodall, 2009; Smalec & Klingle, 2000; Wong & Capella, 2009). Contrary to what the EPPM suggests, however, no support was found in the current study for perceived threat as mediator in the association between fear and behavioural attitudes and intentions, nor for any direct effects of fear in this regard. Lewis et al. (2010) also did not find support for this EPPM proposition, but they did find a significant direct effect of fear on message acceptance. Similarly, Ooms et al. (2015) found a significant direct effect of fear on intention. Overall, the inclusion of fear appeal elements as part of a fotonovela (i.e. threat and self-efficacy) seems to show promise for possibly affecting behavioural attitudes related to personal health behaviour.

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The current study further explored whether differences in attitudes and intentions of readers of the fotonovela were associated with other emotions (in addition to fear). Sadness was found to be a significant and positive predictor of intention towards speaking to a family member or friend who is involved with *tik* about their drug habit. This finding is in line with results reported in a fear appeal context where sadness was aroused, as Dillard et al. (1996), and Dillard and Peck (2000) both reported positive effects for sadness on message acceptance. Compassion was found to be a significant and positive predictor of attitude towards speaking to a family member or friend who is involved with *tik* about their drug habit. Myrick and Oliver (2015) and Oliver et al. (2012) also found a positive association between compassion and message outcomes. Taken together, the emotions sadness and compassion seem to show potential for possibly affecting behavioural outcomes associated with performing health-related behaviour involving other persons.

The associations between behavioural attitudes, behavioural intentions, and knowledge level for the group as a whole and in the different message conditions were also investigated. In line with the prediction of the IMBP that attitude is an important predictor of intention, this study found positive and significant associations between attitude and intention toward not using *tik* as well as between attitude and intention toward speaking to a family member or friend who is involved with *tik* about their drug habit. These positive and significant associations were found for the group of participants as a whole and for the different conditions specifically. These findings are in line with results reported by Park (2000). As discussed, the answers to the knowledge questions related to the outcomes associated with using *tik* in this study were regarded as indicative of behavioural beliefs, with the level of this knowledge then expected to be positively associated with attitude. In the current study some support was found for such an association. The level of knowledge was indeed found to be significantly and positively associated with attitude toward not using *tik* for the group of participants as a whole and for the group in the fotonovela condition, but for the groups in the other conditions no such associations were found. There were also no significant associations between level of knowledge and attitude towards speaking to a family member or friend involved with *tik* about their drug habit, nor for the group as a whole nor for the groups in the different conditions.

In terms of health message preference, results that showed about twice as many respondents preferred reading health information about *tik* in fotonovela format as the other way round. The health message preference was found to be independent from the order in which these documents were presented to participants. Moreover, no significant associations were found between health message preference, on the one hand, and gender, condition, and education level, on the other. For age group, however, there was a significant association with health message preference. While there was a clear preference for the fotonovela over the traditional brochure in the younger age group (19 years or younger) and in the older age group (35 and older), in the 20-34 age group the traditional brochure was clearly preferred.

4.5 Limitations, future research, and practical implications

The current study was not without its limitations. Firstly, budget constraints did not allow for the fotonovela to be printed in full colour or for the traditional brochure to be printed in colour at all. Doing so may have improved both health documents' effectiveness. Secondly, the reading level of participants was not assessed prior to the study. Although the health documents and questionnaire were pre-tested for understanding, some participants may not have fully understood all questions given the generally low level of literacy among the study's target population. Thirdly, for reasons of brevity pertaining to the questionnaire's length, certain variables were measured with single items only (e.g. counterarguing, surprise, anger, sadness, and compassion). Using more than one item to measure a specific concept is preferable, but as explained earlier, the researcher did not want to over-burden respondents who generally are not used to completing questionnaires. Fourthly, some of the measures had psychometric limitations (e.g. poor internal consistency reliability, ceiling effects). Conducting preliminary psychometric research, e.g. by adding a pilot study of the questionnaire with the target population prior to the fotonovela evaluation study to develop and improve the measures, would have been a better approach. However, this was not possible as the researcher had to deal with time- and financial constraints to conduct the overall study, which already encompassed pre- and post-production studies (see Chapter 3), and a waiting room intervention study (see Chapter 5). Lastly, the behavioural attitudes and intentions in the study were captured immediately after exposure to the message. A follow-up session to measure long-term effects, also on actual behaviour, would have been a more ideal scenario.

Future researchers could consider investigating the effects of including contact information of where to seek help for *tik* addiction as part of the fotonovela, given the findings by the organizers of the "I have a drug problem" anti-drugs campaign conducted in the City of Cape Town municipal area in 2014. In an effect study of this campaign, it was found that people tended to use drug-related resources once they became aware of their presence (City of Cape Town, 2014). Based on this finding, the inclusion of resource information on how to address a health issue as part of a health message therefore should form an integral part of such a message. Such additional information could, for example, be included as part of a Q&A section at the back of the fotonovela (see e.g. Boyte et al., 2014; Cabassa et al., 2012; Chan et al., 2015; and Unger et al., 2009 who included health information in this way at the back of their fotonovelas).

It also seems worthwhile to investigate whether the general preference found for the fotonovela evaluated in the study would indeed play out in, for example, a healthcare setting if people are exposed to health information about *tik* presented in fotonovela format amidst other health documents about *tik*. Put simply, would people in their daily life actually prefer to read about *tik* in fotonovela format if presented with this option? The next chapter aims to answer this question. Specifically, an explorative study was conducted where the fotonovela and the traditional brochure evaluated in the current study were placed in the waiting room of a primary health care clinic in the rural Western Cape town of Prince Alfred Hamlet to measure actual preference for either health document, the reasons behind health document preference, and what readers of these documents could recall. A further avenue to explore could include the utilization of so-called "webnovelas" or digital versions of the fotonovela, for example by disseminating information about *tik* in fotonovela format using e.g. the internet, smart device applications or social media platforms (see Boyte et al., 2014).

Despite its limitations, the study presented here adds to the promise shown of fotonovelas as health communication tool in previous research – specifically through the general preference found for this format in disseminating health information about *tik* over more traditional approaches. The findings of the study may be of practical relevance to document designers in health care contexts. Based on the outcomes of this study, document designers may especially consider using health-based fotonovelas if target audiences fall in either a younger or an older age group. In addition,

adding fear appeal characteristics to a fotonovela may help enhance its persuasiveness. According to the outcomes of the present study, it may be good to incorporate elements to try to arouse emotions such as *sadness* and *compassion* in a fotonovela, as these emotions may influence message outcomes in positive ways.

CHAPTER 5. WAITING ROOM INTERVENTION STUDY

5.1 Introduction

This chapter provides details of an explorative study where the fotonovela and the traditional brochure that were developed as discussed in Chapters 3 and 4 were placed in the waiting room of a primary health care clinic to measure actual preference for either health document. Determining actual preference for either health document in a clinic environment provides further clarity to **RQ2** presented in Chapter 1 and answered in Chapter 4: To what extent do Coloured people in the Western Cape prefer a fotonovela about *tik* to a more traditional brochure about this topic? Also explored as part of the current study were the reasons behind deciding to read the health documents and the information readers of these health documents could recall.

Health-related materials play an important role to complement and reinforce health messages from health care providers given during consultations, as patients are often overwhelmed by the amount of information they receive and regularly do not retain such information due to time constraints (Coulter, 1998; Moerenhout et al., 2013; Tarn, 2006). Waiting room environments provide important opportunities to implement and evaluate health promotion and awareness interventions regarding healthy lifestyle choices among patients (and others accompanying them) as patients often spend much time in these environments before receiving care (Oermann, 2003). Having health promotion materials such as brochures available in a waiting room setting allows individuals to interact, engage and learn more about health issues (Freda et al., 1994). Placing health-related materials such as brochures in a waiting room environment is also a cost-effective method to promote a health issue (if found to be effective at all) as it does not necessarily require human intervention (Cass, Ball, & Leveritt, 2016; Maor et al., 2011).

As far as could be determined, only a limited number of studies are available on the effectiveness of materials to promote health issues in a waiting room scenario – including brochure-type documents. Most of these studies show promising results. Cass, Ball, and Leveritt (2016) did an integrative review of 33 studies to investigate the effectiveness of health-related waiting room interventions for promoting healthy lifestyle behaviours, and found that the promotion of health

issues via brochures, posters, internet kiosk/tablets, and videos generally had a positive influence on participants' knowledge, intentions, healthcare use and behaviours. Four studies included in the review by Cass, Ball, and Leveritt focussed specifically on the effects of brochure-type documents in a waiting room environment. The findings of these studies are discussed next.

Moerenhout et al. (2013) assessed patients' perceptions of different health-related leaflets and posters in the waiting rooms of family physicians. A substantial number of patients (a) perceived these documents as being helpful in improving interaction with their doctor, and (b) felt that these documents enhanced their health-related knowledge and self-management. Maor et al. (2011) evaluated the effect of an educational intervention on parents' attitudes toward antibiotic use and included pamphlets and posters in waiting rooms promoting cautious antibiotic use. Reduced expectations for antibiotic treatment were found, as was a stronger tendency to avoid antibiotic treatment, and advanced knowledge about antibiotic treatment for participants exposed to the intervention when compared to a no message control group. A study by Mead, Rhyne, Wiese, Lambert, and Skipper (1995) into the effects of pamphlets about preventative health services in a waiting room environment, however, found no significant differences between an intervention group exposed to the pamphlets and a no message control group, in terms of the uptake of preventative health services. Williams and Bethea (2011) investigated patient awareness of information about oral cancer displayed through leaflets and posters in a dental access centre and found that only a few participants had read the leaflets on display. Respondents cited not noticing the leaflets in the dental access centre as the main reason for not reading them.

In summary, the overall findings from earlier studies only say that health-related brochure-type materials when placed in a waiting room environment (a) may play an important part to help convey and supplement health messages from healthcare providers, and (b) often have a positive effect on behavioural outcomes. It may therefore be important to determine the preference for a specific type of health-related brochure in a waiting room scenario. To the best of the researcher's knowledge, no study has so far been done to determine preference between two health documents in the format of a fotonovela and a traditional brochure when placed in a waiting room setting, even though selection and recall experiments comparable to the current study are a well-known technique in communication design (De Jong & Menno, 1997, pp. 416-418). Hence, this study

may be considered as pioneering work, thereby also presenting a platform to identify possible practical problems that may have to be taken into account in future comparable studies.

5.2 Method

This study was conducted at the primary health care clinic in the Western Cape rural town of Prince Alfred Hamlet. The same field worker from Prince Alfred Hamlet who assisted with the pre-production study, post-production study, and the fotonovela evaluation study discussed in Chapters 3 and 4, assisted with the current study. She was affiliated to the Prince Alfred Hamlet clinic where she worked as a lay counsellor and community health worker. This field worker had unlimited access to the clinic, and was allowed to interact with patients in the clinic.

The field worker placed the fotonovela and traditional brochure in display stands on a table in the waiting room of the clinic over a three week period (see Figure 5.1). The rationale was to compare how many of these documents were taken home by patients in the waiting room during this time in order to determine preference for either health document. The procedure involved the following: During Week 1 of the three week period, 30 copies of the fotonovela were placed in the waiting room. The following week, 30 copies of the traditional brochure were placed in the same waiting room (Week 2). This was followed by placing both health documents in the waiting room (35 copies each) for another one week period (Week 3). Comparisons could then be drawn between the number of fotonovelas and traditional brochures taken home by patients in (a) Week 1 and Week 2, and (b) Week 3, respectively. The field worker was tasked with filling up the display stands with the fotonovela and traditional brochure in the waiting room over the three weeks and kept record of the number of health documents taken.

In order to determine the reasons behind reading the health documents and the information readers of these health documents could recall, the field worker randomly approached some of the patients in the clinic's waiting room who she had observed reading the health document(s) to complete a short questionnaire. These patients were asked to confirm that they had read the health document(s) front to back and, if affirmative, were included in the study. The field worker was present in the waiting room at different times during the three week period to collect the data.

FIGURE 5.1. The fotonovela (on the left-hand side of the table, in a display stand) and the traditional brochure (on the right-hand side of the table, also in a display stand) in the waiting room of the Prince Alfred Hamlet clinic during Week 3 of the waiting room intervention study.

5.2.1 Participants

There were two groups of participants in this study. Group 1 were patients in the waiting room at the Prince Alfred Hamlet clinic who decided to take the health material(s) on display home with them over the three week period. Group 2 were patients who were recruited by the field worker after having been seen reading the fotonovela and/or traditional brochure in the clinic's waiting room.[45] Record was not kept of whether patients who read the health document(s) in the waiting

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[45] It is possible that Group 1 'overlapped' with Group 2. That is, part of the group of patients who read the health document(s) in the waiting room may also have taken these health document(s) home. Compare Moerenhout et al. (2013) who found that of the respondents who had read the leaflets in their study, 45% also took them home.

room also took these document(s) home, as the current study was only interested in health message preference.

5.2.2 Materials

The health materials used in the study were the fotonovela and traditional brochure, both developed by the researcher. As mentioned, the health documents were placed in separate display stands on a table in the clinic's waiting room. As the front page of the fotonovela did not reflect what this booklet was about, the display stand it was placed in was labelled "'n Storie oor Tik" (A story about *Tik*). The front page of the traditional brochure carried the caption *Tik - Hier is die Feite!* (Tik - Here are the facts!). Hence, the display stand on which the traditional brochure was placed did not need to be labelled.

5.2.3 Measures

Keeping track of the number of health documents taken home by patients involved monitoring the number of booklets taken by patients for each of the three weeks (Group 1). To find out the reasons why patients decided to read the health document(s) and what they could remember from doing so, two questions were posed to the patients in Group 2. The questions were: Question 1 "Was there any specific reason(s) why you decided to read the *tik* booklet?" and Question 2 "What can you remember reading about in the booklet?" Question 1 was included to ascertain which aspects of the fotonovela and/or traditional brochure motivated participants to read the booklet(s). The rationale behind Question 2 was to identify and quantify any themes or patterns emerging from the information participants recalled after reading either booklet.

5.2.4 Procedure

The field worker noted the number of health documents taken by patients over the three week period and reported this information to the researcher on a weekly basis. As mentioned, the field worker randomly approached some of the patients who she had seen reading the fotonovela and/or traditional brochure in the waiting room and asked them to answer two related questions. She

posed these questions orally (after obtaining informed consent) and then wrote down participants' responses.

Although comparable studies investigating the role of brochure-type health documents in a waiting room environment included all patients in the waiting room during a certain time period (e.g. Maor et al., 2011; Williams & Bethea, 2011), this was not practically possible in the current study. The field worker could only collect data, i.e. responses to Question 1 and 2, as often as her work schedule allowed, and could also not approach all patients she had seen reading the health documents in the waiting room. She was, however, instructed to collect data during each week of the three week period. Consequently, data related to Question 1 and 2 were collected at random intervals during each of the three weeks of the study. Care was taken during this process not to impose on the clinic visitation times of patients.

5.2.5 Analysis

Comparisons were drawn between the number of fotonovelas and traditional brochures taken by patients in (a) Week 1 and Week 2, and (b) Week 3, respectively. The responses from the participants pertaining to the two questions posed in the questionnaire were captured and quantified in SPSS, and categorized according to themes emerging.

5.3 Results

5.3.1 Health document preference

Demographic information of the patients in the clinic's waiting room who decided to take the health material(s) on display home with them over the three week period is not available. As explained, the rationale was simply to keep track of the number of fotonovelas and/or traditional brochures taken by patients in order to determine preference for either document. Hence, it is not known who took these documents.

Results for Week 1 showed that all the fotonovelas were taken by the Friday morning (Day 5). As a result, the field worker put the traditional brochures on display in the waiting room of the clinic

from the Friday afternoon of Week 1 after the last of the fotonovelas were taken in the morning. All the traditional brochures were taken by the Wednesday afternoon of Week 2. At first glance it seemed that more participants preferred the traditional brochure when comparing the results, as all the copies of this health document was taken in 3½ days compared to the 4 ½ days it took for all the copies of the fotonovela to be taken. However, the number of patients visiting the clinic during Week 1 and 2 was found to fluctuate. Although the exact numbers of patients who visited the clinic on a daily basis were not kept, it is estimated that approximately 70 patients visited the clinic on a daily basis during Week 1, and about 110 patients visited the clinic on a daily basis during Week 2. The higher volume of patients who visited the clinic during Week 2 was attributed to farmworkers from the surrounding farming areas attending the clinic during this time. Farmworkers were given time off from work to visit the clinic in Week 2 as it was the end of harvesting time, which was not the case in Week 1 (SR Rust from the Prince Alfred Hamlet clinic, personal communication, May 17, 2016). Given the higher number of patients visiting the clinic during Week 2 compared to Week 1, the number of participants who preferred to take home either the fotonovela or the traditional brochure therefore seemed proportionally comparable. Due to the lack of clarity in terms of preference for either health document when comparing the number of fotonovelas and traditional brochures taken by patients in Week 1 and 2, it was decided to only use the number of health documents taken during Week 3 in order to determine preference for either document.

Both the fotonovela and traditional brochure (35 copies each) were put on display in the waiting room of the clinic from the Monday morning of Week 3. Results for Week 3 showed that patients had taken all copies of the fotonovela by the Wednesday afternoon (Day 3), while there were still traditional brochures left. The field worker did not record the exact number of traditional brochures left over on the Wednesday afternoon of Week 3. By the end of Thursday (Day 4), however, 10 of the 35 traditional brochures were still left. These last brochures were all taken by the Friday afternoon (Day 5). In summary, the answer to **RQ2** is that people preferred to take home a health message about *tik* in fotonovela format to a more traditional type information brochure.

5.3.2 Reasons for reading the health documents, and information recall

5.3.2.1 Participant information

As mentioned, two questions were posed to participants to establish the reasons why they decided to read the health document(s) and what they could remember from doing so. The questions were: Question 1 "Was there any specific reason(s) why you decided to read the *tik* booklet?" and Question 2 "What can you remember reading about in the booklet?" The responses from all participants in Week 3 of the study ($n = 7$) were omitted. To explain: The field worker mistakenly assumed that she should only approach patients observed reading both health documents to form part of the study (as both booklets were on display during Week 3). Hence, during this week she only asked participants whom she saw reading both booklets to complete a questionnaire. When writing down responses from these participants, she often did not indicate to which health document which responses were applicable. For example, for some responses to Question 1 including "Dit het my nuuskierig gemaak" (It made me curious") or to Question 2 including "Die gevare van *tik*" (The dangers of *tik*), it was not specified to which health document was being referred. In view of this lack of clarity, it was decided to rather omit the responses from Week 3 altogether. The demographic information presented in Tables 5.1 – 5.3 of participants whose answers were analyzed here, therefore only reflects participants from Week 1 and 2.

TABLE 5.1
Questionnaires completed by week

Questionnaires completed	Frequency	Percentage (%)
Week 1 (Fotonovela readers)	19	50.0
Week 2 (Traditional brochure readers)	12	31.6
Total	31	100.0

As Table 5.1 shows, 31 respondents completed questionnaires during Week 1 and Week 2.

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TABLE 5.2

Gender of participants in the waiting room intervention study

| | Gender | | |
Participants	Male % (Count)	Female % (Count)	Total % (Count)
Week 1 (Fotonovela readers)	26.3 (5)	73.7 (14)	100 (19)
Week 2 (Traditional brochure readers)	41.7 (5)	58.3 (7)	100 (12)
Total % (Count)	32.2 (10)	67.8 (21)	100 (31)

As can be seen in Table 5.2, there were almost three times as many female fotonovela readers compared to males who took part in this part of the study, while the number of traditional brochure readers was relatively even in terms of gender distribution.

TABLE 5.3

Gender distribution over age groups of participants in the waiting room intervention study

	Age Group						
	≤19		20 – 34		≥35		
	Male	Female	Male	Female	Male	Female	Total
Participants	% (Count)	% (Count)	% (Count)	% (Count)	% (Count)	% (Count)	% (Count)
Week 1 (Fotonovela readers)	0 (0)	5.3 (1)	15.8 (3)	42.1 (8)	10.5 (2)	26.3 (5)	100 (19)
Week 2 (Traditional brochure readers)	0 (0)	8.3 (1)	16.7 (2)	41.7 (5)	25.0 (3)	8.3 (1)	100 (12)
Total % (Count)	0 (0)	6.5 (2)	16.1 (5)	41.9 (13)	16.1 (5)	19.4 (6)	100 (31)

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As Table 5.3 shows, the highest number of both fotonovela and traditional brochure readers were females in the 20 – 34 age group. The ethnic make-up of participants was not recorded. It may be relevant to know that participants who attend this clinic are predominantly Coloured people from the surrounding area.

5.3.2.2 Reasons for reading the health documents (Question 1)[46]

The responses to Question 1 (why people had decided to read the documents) were categorized according to two main themes: (a) aspects related to the front cover of the health document, and (b) the health subject matter itself. In total, 23 responses were recorded for the fotonovela and 13 responses for the traditional brochure during Week 1 and Week 2 respectively.

For participants who read the fotonovela, the 23 responses recorded were categorized as follows: theme (a) 21 responses, and theme (b) 2 responses. See Table 5.4. For participants who read the traditional brochure, the 13 responses were categorized as follows: theme (a) 3 responses, and theme (b) 10 responses. See Table 5.5.

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[46] During Week 1 and 2, some respondents gave more than one response to the two questions posed about the reasons behind deciding to read the health documents and the information they could recall. As a result, the number of responses to each question does not exactly match the number of participants who were recorded to have read the health materials.

TABLE 5.4

Reasons for reading the fotonovela

Theme	Responses
(a) Aspects related to the front cover of the health document	The front cover attracted my attention (11 responses)
	The front cover made me curious (2 responses)
	The front cover looked interesting (2 responses)
	The front cover looked nice (1 response)
	The title made me curious (3 responses)
	The colour of the front page attracted my attention (1 response)
	The front page picture drew my attention (1 response)
(b) The health subject matter itself	Learn more about *tik* (1 response)
	Tik user in the family (1 response)

TABLE 5.5

Reasons for reading the traditional brochure

Theme	Responses
(a) Aspects related to the front cover of the health document	The front cover attracted my attention (3 responses)
(b) The health subject matter itself	Little *tik* information available in the clinic (3 responses)
	Warn a family member about *tik* (3 responses)
	Tik user in the family (2 responses)
	Curious about *tik* (1 response)
	Tik is a problem in the community (1 response)

In summary, the attractiveness of the front page was highlighted as the main motivating factor as to why people had decided to read the fotonovela, while the health subject matter itself was the main reason why people chose to read the traditional brochure.

5.3.2.3 Information recall (Question 2)

The responses to Question 2 (what people could remember reading about in the booklets) were categorized according to four main themes: (a) health-related effects associated with *tik*, (b) non-health-related effects associated with *tik*, (c) aspects associated with the storyline, and (d) general aspects associated with *tik*.[47] In total, 22 responses were recorded for the fotonovela and 24 responses for the traditional brochure during Week 1 and Week 2, respectively.

For participants who read the fotonovela, the 22 responses recorded were categorized as follows: theme (a) 3 responses, theme (b) 2 responses, and theme (c) 17 responses. See Table 5.6. For participants who read the traditional brochure, the 24 responses recorded were categorized as follows: theme (a) 11 responses, theme (b) 3 responses, and theme (d) 10 responses. See Table 5.7.

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[47] Theme (c) aspects of the storyline was only applicable to the fotonovela, as the traditional brochure did not contain a narrative component. Theme (d) general aspects associated with *tik* was only applicable to the traditional brochure, as the fotonovela did not contain this information. Such information, e.g. the chemical make-up and physical features of *tik*, were included in the traditional brochure as it typically forms part of traditional health brochures. See Chapter 4.

TABLE 5.6
Responses for information recall from participants who read the fotonovela

Theme	Responses
(a) Health-related effects associated with *tik*	"How bad *tik* made Ricardo feel after smoking it" (verbatim; 1 response) "Pamphlet in the booklet showing how nauseous a person looks when he uses *tik*" (verbatim; 1 response) "*Tik* is bad for you" (verbatim; 1 response)
(b) Non-health-related effects associated with *tik*	"The brochure in the book showing that *tik* destroys families" (verbatim; 1 response) "Everything in our community is so sick and the booklet tells everything precisely about our daily lives" (verbatim; 1 response)
(c) Aspects associated with the storyline	Ricardo looking innocent at his workplace (1 response) Percy being a drinker and a *tik* smoker (1 response) Percy and Ricardo being best friends (1 response) Ricardo convincing Anja that Percy is his best friend (1 response) Anja talking to Ricardo about Percy's smoking (1 response) Ricardo ignoring advice from Anja to not smoke *tik* (1 response) Ricardo breaking his promise to not smoke *tik* (1 response) Ricardo having confidence in his rugby team (1 response) Percy pressurising/coaxing Ricardo into smoking *tik* (5 responses) Percy "enjoying" seeing Ricardo smoke *tik* (1 response) Ricardo high on *tik* and forgetting where he was (1 response) Anja looking for Ricardo and finding him confused (1 response) Ricardo wanting to punch Anja (1 response)

TABLE 5.7

Responses for information recall from participants who read the traditional brochure

Theme	Responses
(a) Health-related effects associated with *tik*	"The dangers of *tik*" (2 similar verbatim responses)
	"*Tik* being very dangerous" (2 similar verbatim responses)
	"Why it is dangerous" (2 similar verbatim responses)
	"The effects of *tik*" (2 similar verbatim responses)
	"Long-term and short-term effects of *tik*" (verbatim; 1 response)
	"Your health can suffer" (verbatim; 1 response)
	"How a person can look with big eyes" (verbatim; 1 response)
(b) Non-health-related effects associated with *tik*	Parents of *tik* users are affected (1 response)
	How 'ugly' people act who use *tik* (1 response)
	The behaviour of *tik* heads (1 response)
(d) General aspects associated with *tik*	*Tik* is odourless (2 responses)
	Tik is a chemical/has a chemical name (3 responses)
	Tik is smoked with a bulb (3 responses)
	How to get in touch with the *tik* helpline (2 responses)

In summary, 5 out of 22 responses from participants who read the fotonovela entailed remembering effects associated with *tik* (themes a and b), while more than double the number of responses from participants who read the traditional brochure entailed remembering similar themed responses (14 out of 24 responses). Other aspects remembered by readers of the health materials were related to the storyline (fotonovela readers, theme c) with 17 responses and general aspects associated with *tik* (traditional brochure readers, theme d) with 10 responses.

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5.4 Discussion of the results

The study discussed here determined whether people in a primary healthcare clinical setting preferred taking home a health message about *tik* in fotonovela format or in a more traditional format. The study also presented possible reasons for deciding to read the health documents, and it showed what information readers of these health documents could recall.

In performing this study – the first of this type ever – some practical problems were experienced to determine message preference that could not all be solved (see Section 5.3.1). Nevertheless, there seem to be sufficient grounds to conclude that, based on the findings from Week 3, people preferred to take home the fotonovela over the traditional health brochure. However, this preference will have to be put to the test again in follow-up studies. Incidentally, anecdotal evidence received from the Prince Alfred Hamlet clinic staff revealed that both health documents appeared to be popular among patients. The field worker received many enquiries from patients about both health documents, e.g. where did it come from, where can more copies be obtained from, etc. In view of this positive feedback pertaining to the traditional brochure, it seems that this brochure was appreciated more than similar types of brochures patients were used to.

Based on the responses from participants as to the reasons why they decided to read the fotonovela, the attractiveness of the front page was highlighted as the main motivating factor in this regard. Similar feedback was received in the post-production study (discussed in Chapter 3), which evaluated the draft version of the fotonovela in order to make possible improvements or changes. In the post-production study, respondents said the front page of the fotonovela with its colour picture made them curious to read more. This finding is also in line with the suggestion from Unger et al. (2013, p. 399) that fotonovelas may be effective health communication tools, among other things, because they are regarded as attractive. For participants in the current study who read the traditional brochure, the majority of responses as to why they decided to read this document related to the health subject matter itself. In a nutshell, the responses seem to indicate that people who read the fotonovela did so because of aspects related to its appearance, while people who read the traditional brochure did so because it was the subject matter *tik* they wanted to learn more about.

In terms of information recall, the results showed that more than double the number of responses from participants who read the traditional brochure related to the effects associated with *tik* compared to similar responses received from fotonovela readers. One possible explanation may relate to the indirect nature of the health information in the fotonovela. That is, the health information in the fotonovela is embedded as part of the storyline, which makes it less obvious (Moyer-Gusé, 2008), while the health information in the traditional brochure is presented in a more direct fashion to the reader. This finding suggests that in future fotonovelas on health issues, such information perhaps should be added, for instance in a Q&A section (see Boyte et al., 2014; Chan et al., 2015; and Unger et al., 2009 who included additional health information in this way at the back of their fotonovelas).

5.5 Limitations, future research, and practical implications

Errors made by the field worker during the data collection process were a clear limitation of this study. Firstly, she only approached patients observed reading both the fotonovela and traditional brochure in the clinic's waiting room to form part of the study during Week 3, instead of approaching patients seen reading any (or both) of these health documents. Secondly, when writing down the responses from participants in Week 3, the field worker often did not indicate to which health document which responses were applicable, resulting in these responses having to be omitted altogether. In retrospect, it seems like a more hands-on approach should have been followed by the researcher in order to avoid these pitfalls. In the current scenario, however, it was felt that the field worker had to conduct the data collection process herself in order for the study to yield any usable findings at all, given her (a) existing affiliation with the clinic and good rapport with patients, (b) unlimited access to the clinic and (c) being allowed to interact at will with patients in the waiting room. Moreover, due to logistical and financial challenges, it was not possible for the researcher to be on-site during the data collection process.

Based on the number of health document(s) taken home by patients in Week 3, the fotonovela format in which the *tik* message was presented proved more popular compared to a traditional brochure about the same topic. Therefore, at first glance the fotonovela seemed to be the health document of choice to learn more about *tik*. Closer inspection, however, revealed that people wanted to read the fotonovela primarily because of aspects related to its appearance and not

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necessarily because of the subject matter it entailed, which seemed to mainly be the reason why people wanted to read the traditional brochure. These outcomes may be of practical relevance to document designers in health care contexts, as it appears that combining fotonovelas with elements from traditional brochures may increase the chances of the included health messages reaching audiences. Therefore, further research is warranted into the efficacy of, and preferences for fotonovelas that incorporate features of traditional health brochures – or the other way around. Likewise, given the fact that this study was the first of its kind, future researchers may need to especially be cognisant of the practical problems experienced in this study when attempting comparable studies.

CHAPTER 6. GENERAL DISCUSSION

6.1 Introduction

The current chapter summarizes the main findings and conclusions of this dissertation. It will start with a brief overview (Section 6.2), which encapsulates the goals of the research project, the set-up of the chapters, and the main findings. In Section 6.3, the thinking behind the use of different types of materials and methods to develop and evaluate the fotonovela is discussed. In Section 6.4, a detailed discussion of the main findings in terms of the evaluation of the fotonovela is presented. Here, the answers to the research questions and the results related to the hypotheses discussed in Chapters 4 and 5 are repeated. In Section 6.4.1, the differences found between the two health formats in terms of respondents' knowledge level, behavioural attitudes and behavioural intentions are discussed. Next follows possible explanations for the differences found in behavioural attitudes and behavioural intentions of readers of the fotonovela (Section 6.4.2). In Section 6.4.3, one of the main outcomes of this dissertation is discussed, that is, the fact that people preferred a health message about *tik* in fotonovela format as opposed to a more traditional type of information brochure. In the last sub-section of Section 6.4, a discussion follows of the differences in the type of information remembered from reading the health documents in a clinical setting (Section 6.4.4). Finally, conclusions are drawn about the practical implications of this research project in its entirety (Section 6.5).

6.2 Brief overview

The stimulant drug methamphetamine – commonly known under the slang name *tik* in SA – is responsible for the fastest addiction rates ever seen in this country, especially among Coloured people of its Western Cape province. The aim of this research project was to establish whether and if so, why, fotonovelas or photo storybooks – small booklets that tell a dramatic story by means of photographs and short and easily readable captions – can be an effective messaging tool to communicate the dangers associated with using *tik* to Coloured communities and persuade them to avoid this drug.

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Chapter 1 introduced the study, focussing on the reasons why it may be worthwhile to investigate the use of fotonovelas to communicate health messages about *tik* to Coloured audiences. In Chapter 2, a review of the literature related to fotonovelas as health communication tools was presented, in order to provide the details of and the context for the argument presented in Chapter 1 for the use of fotonovelas to disseminate health messages about *tik*. A comprehensive review of the literature was also performed in order to identify results from earlier studies into the effects of such fotonovelas, and to find possible guidelines for the development and evaluation of the fotonovela used in this research project. The subsequent development and evaluation of this fotonovela along with possible explanations for the effects found were presented in Chapters 3, 4 and 5.

In Chapter 2, the literature review revealed that only a few health-based fotonovela studies have been conducted. However, these studies showed promise for health-related fotonovelas having positive effects on behavioural outcomes. More specifically, most of the fotonovelas in these studies proved to be especially effective in communicating health messages to low-literate, underprivileged audiences – a category in which many Coloured people fall. Fotonovelas have also been successfully used for health promotion purposes in a South African context, as studies by James et al. (2005) and Dick et al. (1996) show, with the latter study revealing promising findings for the possible use of fotonovelas among Coloured people. These findings provided further motivation to investigate the possibility of using fotonovelas to disseminate health messages about *tik* among Coloured audiences.

Regarding the empirical evaluation study discussed in Chapter 4, which entailed a randomized controlled trial, the effects of the fotonovela were compared with those of a more traditional type information brochure and a control condition, in terms of differences in the knowledge level, behavioural attitude, and behavioural intention in a between-groups experimental design. Results showed that the effects of the two health formats differed little in terms of respondents' knowledge level, attitudes and intentions, or when comparing the fotonovela and the traditional brochure to the control condition, although some effects were found (see Section 6.4). In Chapter 4, it was also determined to what extent participants' differences in attitudes and intentions could be explained by (a) theoretical constructs related to narrative engagement, (b) theoretical constructs related to fear appeals, and (c) the arousal of other emotions (in addition to fear). Theoretical constructs

related to narrative engagement and fear appeals as well as the arousal of emotions provided limited clarity for the differences found in attitudes and intentions of readers of the fotonovela, although some effects were found (see Section 6.4).

The empirical evaluation study discussed in Chapter 4 also entailed establishing to what extent people would prefer a fotonovela about *tik* or a more traditional type information brochure about this topic, as this was not systematically explored in any of the studies identified in the literature review. It was found that people said they would prefer to read a health message about *tik* in fotonovela format as opposed to a more traditional type information brochure. The actual preference for the fotonovela as health communication tool was explored in Chapter 5, in an exploratory study conducted in a primary health care setting. In this study, it was found that the patients preferred to take home the fotonovela rather than a more traditional type information brochure.

6.3 Methodological reflection

In Chapters 3, 4 and 5 of this dissertation, a number of issues relating to methodology arose. Below, the choice of materials and the relevance of the approaches used to develop and evaluate the fotonovela that was used in the present study, are discussed.

As mentioned in Chapter 1, it was decided to develop a fotonovela specifically for the present study, as existing health-related documentation about *tik* in this format was not available, with such documentation mainly being limited to traditional brochures that primarily contain facts and figures about the dangers of *tik*.

The literature review presented in Chapter 2 found that in the majority of fotonovela studies, this medium was chosen for use in a health communication context because of its ability to present information in a culturally and linguistically familiar way to specific audiences. The majority of health-based fotonovelas developed were therefore culturally and linguistically adapted for their intended target audiences, and were found to be mostly effective. In these studies, the development process often involved cocreation of the fotonovela with input from the target audience members. Subject field experts, e.g. scriptwriters and health specialists, were also regularly found to be

involved in helping to develop fotonovelas. Fotonovelas were also often selected because of their E-E narrative format through which health information can be conveyed in an informal and entertaining way. Based on these findings, the fotonovela about *tik* was developed as discussed in Chapter 3. To develop this fotonovela, an E-E strategy, which involved a six-step production process (Cabassa et al., 2012), was followed. Moreover, fear appeal characteristics were added as part of the fotonovela during the development phase to help improve its effectiveness. As discussed in Chapter 1, the reasoning for this decision was based on (a) the widely reported role of fear appeals in successfully motivating behavioural changes in accordance with message recommendations, and (b) the influential part that emotions in general and fear more specifically are known to play in the narrative persuasion process. The development phase encompassed a pre-production and post-production study, where a formative approach was followed in both studies. This approach was chosen as it allows for the development of a targeted and culturally appropriate health risk message. The pre-production study served to identify the most appropriate, relevant and useful information to form part of the message content. The purpose of the post-production study was to test the first version of the fotonovela in order to make possible improvements or changes if/where necessary.

In terms of fotonovela evaluation, the review of the literature in Chapter 2 revealed that some of the health-based fotonovela studies lacked experimental rigour to draw definite conclusions for the effects found. There was also a general lack of explanations as to why fotonovelas were effective (or not) in conveying health messages, with a lack of empirical evidence to back up the validity of the arguments in cases where possible explanations were provided for the effects found. Based on these observations, the evaluation of the fotonovela as discussed in Chapter 4 employed an experimental design, by comparing the effects found of the fotonovela to those of a more traditional text format, as well as of a control condition. For those reasons, the researcher developed a traditional brochure himself, which contained information that was highly comparable to the information in the fotonovela. Initially, the idea was to compare the fotonovela with an existing traditional brochure about *tik*, which would be similar in terms of the health information content. Two Afrikaans traditional health documents about *tik* were sourced for this purpose. Both documents, however, were not deemed suitable for this study. The first document contained incorrect health information about the dangers of *tik* as well as a number of spelling errors, which

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disqualified it from use in the study. The second document contained factual information as well as a short narrative insert. Due to the narrative component contained in this second document, it was decided not to use it, as it would then not be possible to determine preference for either a narrative or a non-narrative type message format, which the study set out to determine.

To come up with possible explanations for the effects of fotonovelas – while at the same time making sure that such explanations are accompanied by convincing evidence – the study employed a theoretical approach drawing from constructs related to narrative engagement. Moreover, as it was decided to include fear appeal characteristics in the fotonovela, a theory from the fear appeal literature could also be employed to help explain possible effects found. As described in Chapter 1, the literature suggests many well-researched theories to explain the effects of narrative engagement and fear appeals, respectively. Hence, two of these theories, namely the EORM from the narrative persuasion literature and the EPPM from the fear appeal literature, were employed for this purpose. Finally, the influence of other emotions than fear on message outcomes was explored, as several narrative-based studies have shown that not only fear but also other emotions may affect health message outcomes.

As discussed in Chapter 5, the exploratory approach followed in the waiting room intervention study to determine the actual preference for either the fotonovela or traditional brochure in a primary health care setting, involved comparing the number of booklets taken by patients in the clinic's waiting room. This method was deemed the simplest and the most practical in a clinic scenario where the manipulation of conditions to help set up the experiment was not possible to do.

In both the development and evaluation of the fotonovela, questionnaires were used to gather information from respondents. Three types of questions were used: single-item scales, multiple-item scales and open questions. An open question was used in the post-production study during the development phase of the fotonovela to identify recommendations for improvements to the fotonovela. Open questions were also used in the waiting room intervention study, to establish the reasons why patients decided to read the health document(s) and what they could remember from doing so. For all the other questions included in the development and evaluation phases of the

fotonovela, scale questions were used. The main reason for doing so was that scale questions were considered as fairly easy to answer, which was important given the historically low literacy levels of respondents as discussed in Chapter 1 (actual literacy levels were not measured). Another important motivation for the choice of scale questions was to avoid over-burdening respondents, given the fact that they were not used to complete questionnaires or form part of research studies in general. In addition, this method allowed for the collection of comparable data for all respondents.

6.4 Main findings

6.4.1 The effects of the three conditions on knowledge level, attitudes and intentions

The results did not show knowledge gain in the fotonovela group to be significantly higher compared to the traditional brochure group. When compared to the control condition, both health documents did have a positive and significant effect, however, on knowledge level for those questions that did not show ceiling effects. The effects of the two health documents did not differ in terms of respondents' attitudes. However, intention towards speaking to a family member or friend who is involved with *tik* about their drug habit was found to be significantly higher for those respondents in the fotonovela condition compared to those respondents in the traditional brochure condition. The results did not show attitudes and intentions in the fotonovela and traditional brochure group to be significantly higher compared to the control group.

In summary, although some differences were found, comparisons with regard to respondents' knowledge gain, attitudes and intentions did not yield conclusive evidence in terms of either one of the fotonovela or traditional brochure being superior to the other. The answer to **RQ1** ("To what extent does reading a fotonovela about *tik* influence the knowledge level, behavioural attitudes, and behavioural intentions of Coloured people in the Western Cape as compared to reading a more traditional brochure about this topic?") is that reading this fotonovela about *tik* did not result in knowledge gain, attitudes and behavioural intentions to be significantly different when compared to reading a more traditional brochure about this topic.

6.4.2 Explanations for the differences in atittudes and intentions of readers of the fotonovela

No support was found for explanations suggested by the EORM for the differences found in attitudes and intentions of readers of the fotonovela, operationalized as **H1** – **H4.** Specifically, the results did not offer support for **H1** ("*Identification* is associated with *counterarguing*, which in turn is associated with story-consistent behavioural attitudes and behavioural intentions"), **H2** ("*Identification* is associated with *perceived vulnerability*, which in turn is associated with story-consistent behavioural attitudes and behavioural intentions"), **H3** ("*Transportation* is associated with *counterarguing*, which in turn is associated with story-consistent behavioural attitudes and behavioural intentions"), or **H4** ("*Perceived similarity* is associated with *perceived vulnerability*, which in turn is associated with story-consistent behavioural attitudes and behavioural intentions").

Limited support was found for explanations suggested by the EPPM for the differences found in attitudes and intentions of readers of the fotonovela. In line with what the EPPM suggests, an association was found between perceived threat and a positive attitude towards not using *tik* in cases where perceived self-efficacy was high. Hence, including the fear appeal elements threat and self-efficacy as part of a fotonovela seems to show promise for possibly affecting behavioural attitudes related to personal health behaviour. Partial support was therefore found for **H5** ("If perceived efficacy is high, perceived threat is associated with behavioural attitudes and behavioural intentions"). However, no support was found for **H6** ("If perceived efficacy is high, the associations of fear and behavioural attitudes and behavioural intentions are mediated by perceived threat").

The data provided limited support to suggest that differences found in attitudes and intentions of readers of the fotonovela could be explained by the arousal of specific emotions. The emotions *sadness* and *compassion* were found to be significant (and positive) predictors of intention and attitude toward speaking to a family member or friend who is involved with *tik* about their drug habit, respectively. These emotions therefore seem to show potential for possibly affecting outcomes associated with performing health-related behaviour involving other persons. These

results therefore suggest that differences found in attitudes and intentions could be partially explained by the emotions *sadness* and *compassion*, i.e. lending support to **H8** ("Sadness is associated with behavioural attitudes and behavioural intentions) and **H10** ("Compassion is associated with behavioural attitudes and behavioural intentions). However, results suggested that differences found in attitudes and intentions could not be explained by the emotions *anger* and *surprise*, i.e. lending no support to **H7** ("Surprise is associated with behavioural attitudes and behavioural intentions) and **H9** ("Anger is associated with behavioural attitudes and behavioural intentions).

Although not offering explanations for differences in participants' attitudes and intentions as such, the associations between behavioural attitudes, behavioural intentions, and knowledge level were also investigated. Positive and significant associations were found between attitude and intention toward not using *tik* as well as between attitude and intention toward speaking to a family member or friend who is involved with *tik*. These positive and significant associations were also found for the group of participants as a whole and for the traditional brochure and control condition. Level of knowledge was found to be significantly and positively associated with attitude toward not using *tik*. This positive and significant association was also found for the group of participants as a whole, but for the groups in the other conditions no such association was found. Some support was thus found for the expected associations between behavioural attitudes, behavioural intentions, and knowledge level. Hence, the analyses of the data offer partial support for **H11** ("Behavioural attitude is associated with behavioural intention and with knowledge level").

6.4.3 Health message preference

In both the fotonovela evaluation study conducted under experimental conditions and in the waiting room intervention study conducted among patients in an everyday health clinic setting, participants preferred a health message about *tik* in fotonovela format to a more traditional type information brochure. In the fotonovela evaluation study, about twice as many respondents said that they preferred to read health information about *tik* in fotonovela format, with a clear preference for the fotonovela over the traditional brochure in the younger age group (19 years or younger) and in the older age group (35 and older). During Week 3 of the waiting room intervention study, when both the fotonovela and the traditional health brochure were on display in the clinic, people

preferred to take home the fotonovela to the traditional health brochure. When patients in the clinic were questioned about why they read the fotonovela, the reasons mainly related to its appearance. Although a preference was found for the fotonovela in the waiting room intervention study, the field worker received positive feedback from patients about both health documents during and after the waiting room intervention study. Based on this information, it seems that the traditional brochure developed by the researcher may have been more popular than similar type brochures patients were used to.

In summary, the answer to **RQ2** ("To what extent do Coloured people in the Western Cape prefer a fotonovela about *tik* to a more traditional brochure about this topic?") is that people preferred a health message about *tik* in fotonovela format over a more traditional type information brochure.

6.4.4 Differences in the type of information remembered from reading the health documents

The findings of the waiting room intervention in Chapter 5 revealed a clear difference in the type of information recalled when reading either the fotonovela or the traditional health information brochure in a clinical setting. Participants who read the fotonovela remembered aspects of the storyline best, while participants who read the traditional brochure mainly recalled health information associated with *tik*.

6.5 Practical implications

In both the fotonovela evaluation study conducted under experimental conditions and in the waiting room intervention study conducted among patients in an everyday health clinic scenario, people preferred a health message about *tik* in fotonovela format as opposed to a more traditional type information brochure. Based on this preference and on the comparable knowledge and behavioural intentions that were found after people had actually read the information in one of these formats, it is recommend that document designers should consider using fotonovelas as a tool for health communication about *tik* or similar subjects. In order to help enhance the persuasiveness of such a fotonovela, health message practitioners could also consider adding fear appeal characteristics to this health document and incorporating elements to try to arouse the

emotions *sadness* and *compassion*. Document designers, who decide to develop fotonovelas as health communication tool, have to keep in mind that developing high quality health-related fotonovelas may have cost implications (see Chapters 2 and 3).

As reported, the main findings from the waiting room intervention study revealed that the reasons for preferring the fotonovela seemed to relate more to the appearance of the fotonovela than to the health topic itself. These findings pose an interesting conundrum to health message developers contemplating the use of fotonovelas in their campaigns, for instance to address *tik* issues. On the one hand, health information in general seems to better reach the audience through fotonovelas, while on the other, a traditionally looking format seems to be more attractive to people who are seeking specific information about a given health topic. One possible way to resolve this issue may be to add a Q&A section at the end of the fotonovela where the health information can be included (see e.g. Boyte et al., 2014; Cabassa et al., 2012; Chan et al., 2015; Unger et al., 2009; Unger et al., 2013), and then to 'announce' to the reader on the front cover that information about a specific health topic can be found inside. Combining a narrative with an explicit persuasive appeal such as a Q&A section has proven successful in previous studies to influence health-related behaviour in a positive way (Moyer-Gusé, Jain, & Chung, 2012). As discussed in Chapters 3 and 4, the fotonovela in the present study did not include all possible information about *tik*. Adding a Q&A section could also help to address additional information about a health issue not covered as part of a fotonovela narrative. As reported in the waiting room intervention study in Chapter 5, readers of the fotonovela recalled very little of the health information related to *tik*, possibly due to the health information being embedded as part of the storyline. By adding a Q&A section, health information can thus be repeated and/or presented in a more direct fashion, which could help improve the chances of readers of a fotonovela taking notice of and remembering the health information being conveyed.

To the best of the researcher's knowledge, the research project presented here is the first health-related fotonovela study to combine the following elements: (a) using a randomized controlled trial in a between-groups experimental design to compare the effects of a fotonovela to another health document format and a no message control group, (b) incorporating theory-based explanations for attitudes and intentions of readers of a fotonovela, (c) gathering evidence about

whether people would prefer reading a fotonovela over a comparable health document, and (d) exploring how a fotonovela is perceived as health communication tool in a primary health care setting. As a result, this research project not only showed how an alternative health communication strategy may be utilized to help address the *tik* crisis facing many Coloured communities in the Western Cape province of SA, but it also provided more insight into how formats may be developed and tested that help to distribute information on health-threatening topics which target groups perceived as relevant and liked enough to really start – and keep – reading.

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Addendum A – Ethics clearance letter and consent form

UNIVERSITEIT·STELLENBOSCH·UNIVERSITY
jou kennisvennoot · your knowledge partner

Approval Notice
Stipulated documents/requirements

05-Aug-2015
Davis, Herbert HD

Proposal #: DESC/Davis/May2015/23
Title: The effects of fotonovela including fear and surprise in disseminating messages about substance abuse

Dear Mr. Herbert Davis,

Your **Stipulated documents/requirements** received on **14-Jul-2015**, was reviewed by members of the **Research Ethics Committee: Human Research (Humanities)** via Expedited review procedures on **19-Jul-2015** and was approved.
Sincerely,

Clarissa Graham
REC Coordinator
Research Ethics Committee: Human Research (Humanities)

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UNIVERSITEIT STELLENBOSCH
INWILLIGING OM DEEL TE NEEM AAN NAVORSING

Navorsingsprojek aangebied deur die Universiteit van Stellenbosch

U word gevra om deel te neem aan hierdie studie wat gedoen word deur Burt Davis van die Universiteit van Stellenbosch. U word gevra om deel te neem omdat u in die area bly waar die studie plaasvind.

1. WAT MOET U DOEN?

Afhangende van watter dokumente ons vir u uitdeel, moet u asseblief een van twee informasiestukke deurlees en dan 'n vraelys daaroor voltooi; of slegs 'n vraelys voltooi. Ons sal vir u presies sê wat om te doen sodra u die dokumente ontvang het.

2. WAT SAL MET MY GEBEUR AS EK DEELNEEM?

Daar kan niks met u gebeur as u deelneem aan die studie nie.

3. IS DAAR VOORDELE VIR MY AS EK DEELNEEM?

Daar is nie voordele vir u om deel te neem aan die studie nie.

4. SAL EK BETAAL WORD AS EK DEELNEEM?

U sal nie betaal word om deel te neem aan die studie nie.

5. SAL IEMAND WEET AS EK DEELNEEM?

Alhoewel u naam of hierdie inwilligingsvorm verskyn, verskyn u naam nie op die vraelys wat u gaan voltooi nie. Daar is dus geen manier hoe iemand sal weet dat dit u is wat die vraelys invul nie. Net die navorser sal toegang tot die voltooide vraelyste hê. Hy belowe om dit in 'n kas toe te sluit. As hy die informasie op sy rekenaar intik, sal daar 'n wagwoord wees wat niemand anders sal weet behalwe die navorser nie.

6. DEELNAME EN ONTREKKING

U kan self besluit of u aan die studie wil deelneem of nie. Indien u besluit om aan die studie deel te neem, kan u enige tyd besluit om te onttrek. U kan ook weier om op sekere vrae te antwoord, maar steeds aan die studie deelneem.

7.   MET WIE KAN EK PRAAT OOR DIE STUDIE?

Indien u enige vrae het, kan u vir Burt Davis kontak by selnommer 082 832 2828, by die werk op 021 808 3006 of op e-pos by burt@sun.ac.za. U kan ook vir Leon de Stadler kontak op selnommer 083 635 4290, by die werk 021 808 2167 of op e-pos by lgds@sun.ac.za.

8.   WAT IS U REGTE IN DIE STUDIE?

Al u regte geld as u besluit om deel te neem aan die studie. Indien u meer will weet oor spesifieke regte, skakel met Maléne Fouché [mfouche@sun.ac.za; 021 808 4622] van die Afdeling Navorsingsontwikkeling by Universiteit Stellenbosch.

VERKLARING DEUR DEELNEMER

Die bostaande inligting is aan my gegee en verduidelik deur Burt Davis in Afrikaans wat ek goed verstaan. Ek is die geleentheid gebied om vrae te vra en my vrae is goed beantwoord.

Ek willig hiermee vrywillig in om deel te neem aan die studie. 'n Afskrif van hierdie vorm is aan my gegee.

---

*U Naam en Van (VUL ASSEBLIEF SELF HIER IN)

_____

*U Handtekening (TEKEN ASSEBLIEF SELF HIER)

_____

Datum

VERKLARING DEUR ONDERSOEKER

Ek verklaar dat ek die inligting in hierdie dokument verduidelik het aan die deelnemer wie se naam hierbo verskyn. Hy/sy is aangemoedig en oorgenoeg tyd gegee om vrae aan my te stel. Dié gesprek is in Afrikaans gevoer en geen tolk is gebruik nie.

Handtekening van ondersoeker   Datum

Goedgekeur Subkomitee A 25 Oktober 2004

Addendum B – Fotonovela

Projekdirekteurs
Project Directors
Burt Davis
Carel Jansen
Leon de Stadler

Vervaardiger/Skepper
Producer/Creator
Burt Davis

Fotograaf
Photographer
Brian Seymour

Kunsregisseur
Art Director
Vicky Joubert

Skrywer
Writer
Burt Davis

Taaladviseur
Language Advisor
Salmon Smith

Storiebordkunstenaar
Storyboard Artist
Annette Klinger

Grafiese Ontwerper
Graphic Designer
HMD Designs

Akteurs
Actors
Ricardo de Ruiter
Aine de Vries
Percy Speelman
Octavian Sebybo
Deon Hendricks
Ernest Samuels
Arlene Willetts
Whitney Williams

Spesiale dank aan:
Special thanks to:
Jan du Toit
Jimmie Earl Perry
Bertrum Clayton
Jacques Schalkwyk
Bianca Farao
Nazeem Hardien
Fowzia Adams
Wilma Willemse
Rialdo Alexander

Geborg deur / Funded by

UNIVERSITEIT
STELLENBOSCH
UNIVERSITY

Vir nadere inligting:
For more information:
Burt Davis
Afrika Sentrum vir MIV/Vigsbestuur
Africa Centre for HIV/AIDS Management
Universiteit Stellenbosch
Stellenbosch University
+27 21 808 3006   burt@sun.ac.za

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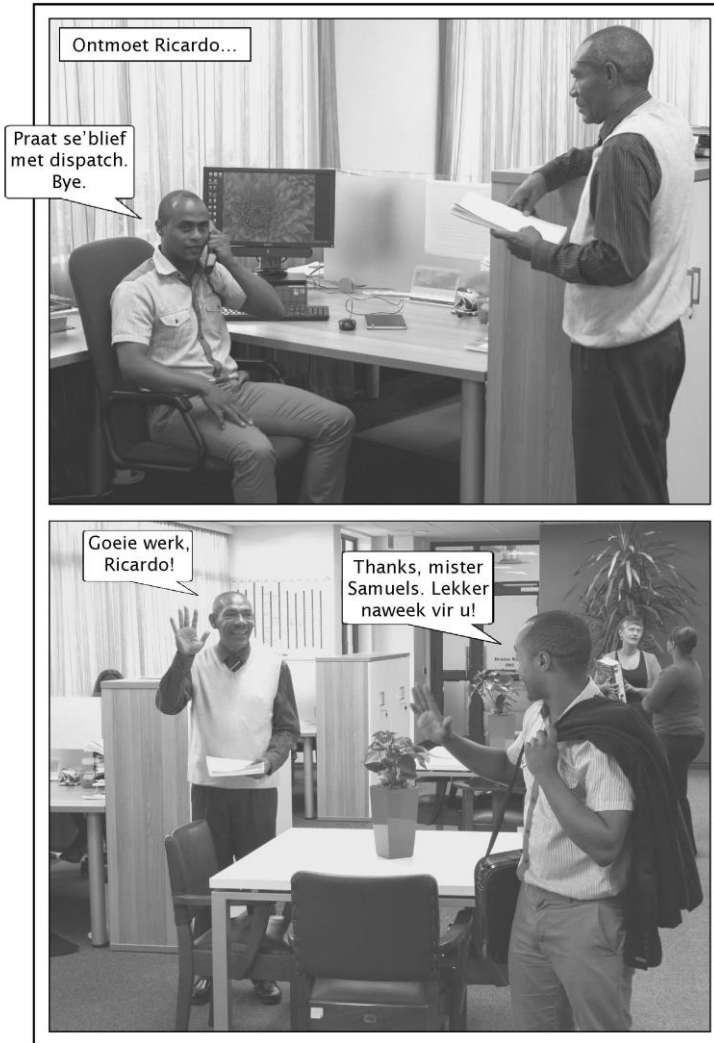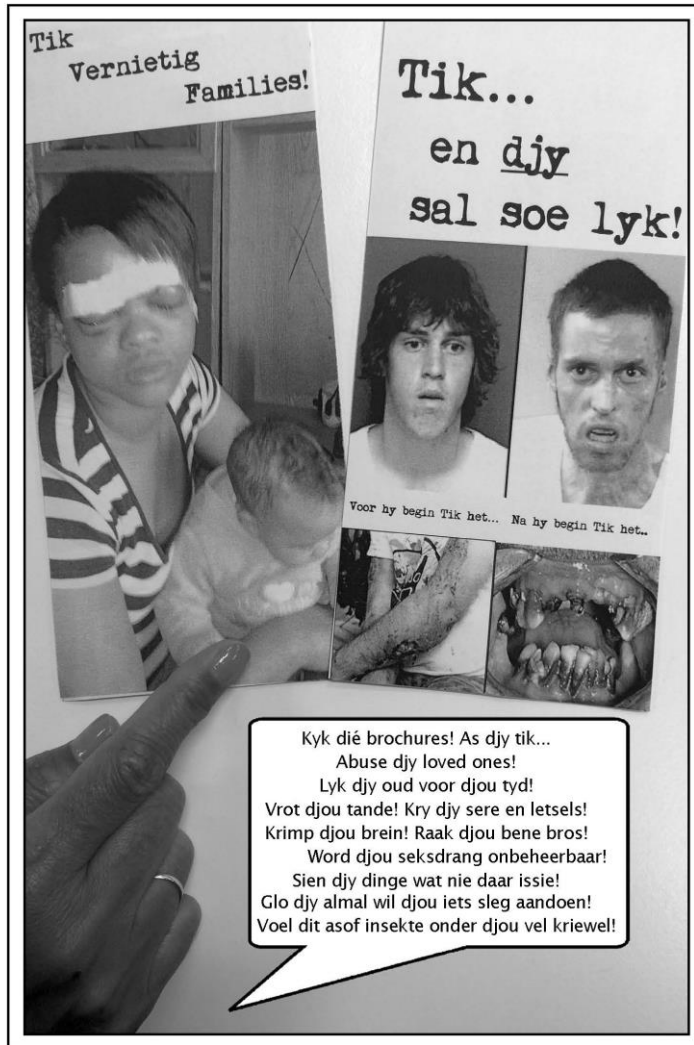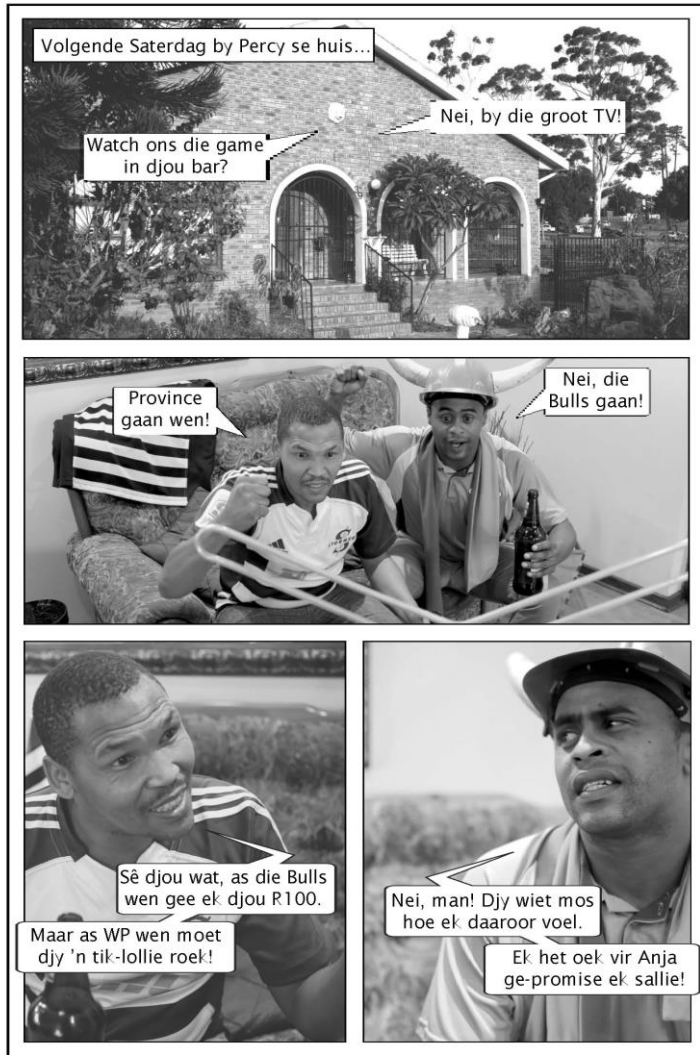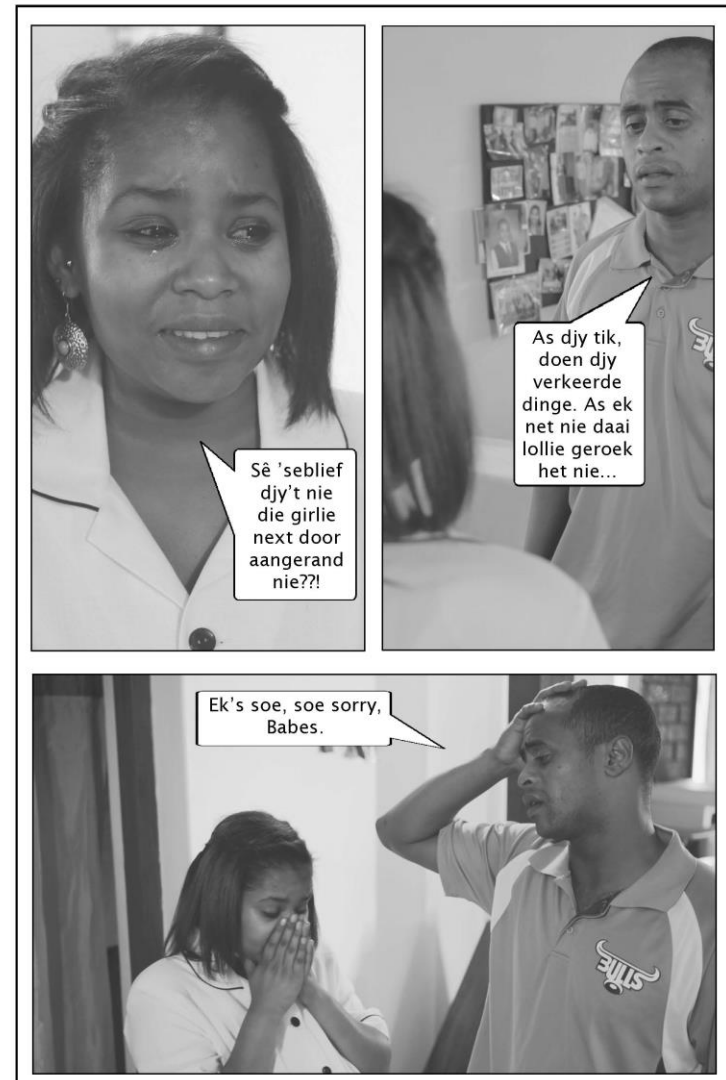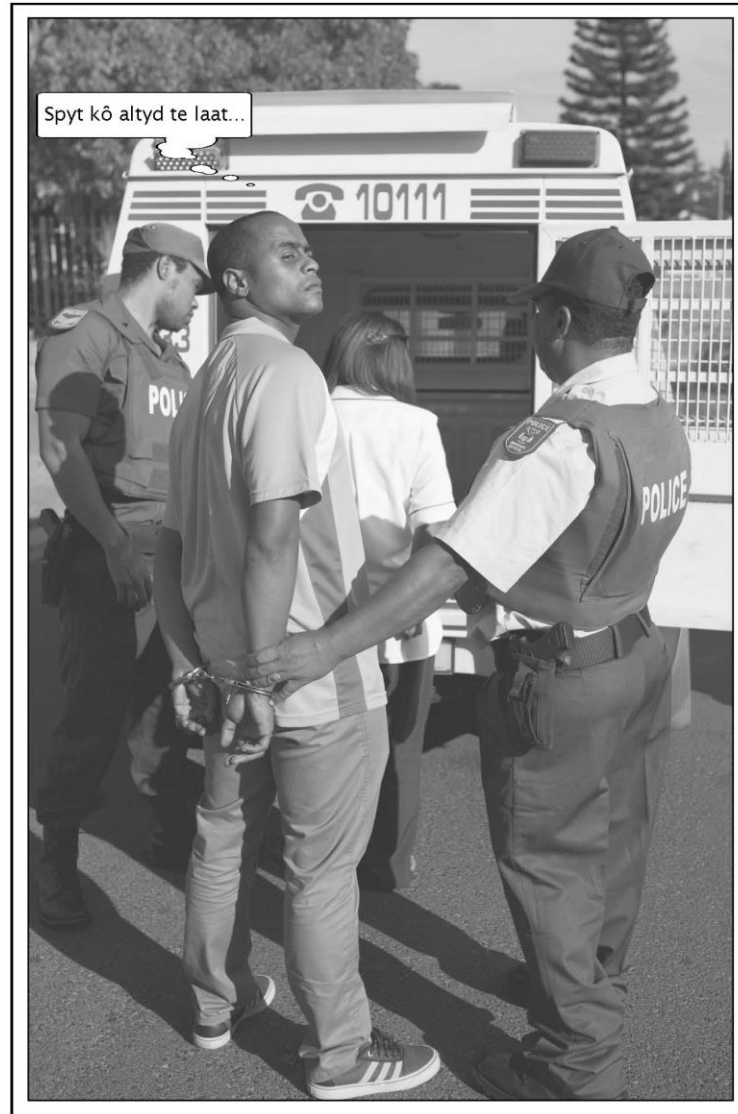
Addendum C – *Die wrede feite oor tik*

Tieners, wie se brein is in 'n uiters kwesbare stadium van ontwikkeling, is meer geneig om te eindig met' n chroniese geestelike siekte.

In die toetse wat uitgevoer is op die erns van die gevolge wat voortspruit uit die gebruik van tik, is daar opgemerk dat selfs nadat hy vir 14 maande skoon, die skade aan die brein wat nog was duidelik. As gevolg van uiterste druk op die psigiatriese beddens en behandeling kan hanteer nie psigiaters Tik pasiënte behoorlik. Al wat hulle kan doen is om te stabiliseer en ontslag gebruikers so gou moontlik om meer dringende sake te hanteer. Die gevolg is dat die gebruiker is ontslaan en terug na die familie / gemeenskap / 'n konstante voorraad van die middel weer. By kry weer houvas, die verslaafde opbrengste weer vir 'n vinnige-fix behandeling, en die bose kringloop weer van voor af begin. The net result is:

Probleme met die helderheid van denke, 'n lae IQ en swak geheue kapasiteit.

Is dit die moeite werd om met jou lewe te dobbel?

Alcohol and Drug Concerns-Cape
Non–Profit Organisation
Registration No: 000–618
16 Drogheda Road, Golflinks Estate,
Wynberg, 7800
Tel: 021 797 0583 Fax: 021 762 4235
Email: adccape@telkomsa.net

Alcohol and Drug Concerns-Transvaal
Non-Profit Organisation
Registration No: 009-780
5 Hammond Road, West Turffontein
Johannesburg
Tel: 011 433 2372 Fax: 011 433 2760
Email: charlene@alcoholanddrugconcerns.org.za

DIE WREDE FEITE OOR

TIK

Uitgereik as 'n hulpbron om 'n meer gesonde dwelmvrye lewe te geniet teenoor dit van 'n dwelmslaaf.

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WAT IS TIK?

Tik is 'n reuklose, kristal-agtige stof. Dit is 'n stimulant wat versnel die funksionering van die lewensbelangrike organe, bv die hart. Dit is wreed en is uiters verslawend skadelik vir die sentrale senuweestelsel.

HOE WORD TIK GEBUIK?

Dit is gewoonlik in 'n gerookte gloeilamp of' n glas pyp 'n sogenaamde "lolly". Die kristalle is verhit in die bol / pyp en ingeasem word. Maar dit kan ook ingesluk word, ingespuit of gesnuif word, vir 'n onmiddellike, intensiewe "high". Die gewone metode van misbruik is om te "crash" of "binge", wat eenvoudig beteken dat die gebruiker gebruik dit, gaan in die onttrekking gebruik dan 'n groter hoeveelheid van die onttrekkingsimptome na bo.

SIMPTOME

• Ongewone energie
• Gewigsverlies
• Aggressie
• Slaap probleme

WAT IS DIE UITWERKINGS?

• Verlies aan konsentrasie
• Toenemend eetlus
• Geheue verlies
• 'n Toename in die seks
• Groter vertroue

Langtermyn-effekte sluit in:
• Risiko van verslawing
• Seksuele disfunksie
• Psychosis
• Geweld
• Die risiko van selfmoord

GEVARE

Aangename gevoelens kom uit 'n verhoging in' n brein chemiese (dopamien), waarin die gevoelens van plesier. Die liggaam pas dan na die verhoogde vlakke van dopamien, en die effekte van Tik vinnig ontwikkel.

Daarom moet gebruikers groter en groter dosisse van die dwelm dieselfde aangename gevoelens te geniet. Dit maak die dwelms vreeslik verslawend. En dosis vlakke kan uiters gevaarlik of selfs noodlottige te danke aan die onvoorspelbare aard van die middel!

Die Universiteit van Stellenbosh, in 'n studie oor die dwelm papier, het getoon dat volgehoue gebruik van Tik kan eindig met' verkleinerde brein, en die "gate" te vorm, waar die brein saak gebruik word.Die verlies van breinweefsel - of die brein saak nie - die resultate in die "gate" met 'n vloeistof om gevul te word.

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Addendum D – *Tik is nie vir my nie*

Tik maak jou tande vrot.

Wanneer jy Tik gebruik voel dit die heeltyd asof daar insekte onder jou vel is en krap jy aanhoudend. Jy krap jouself later stukkend en dit word groot, onooglike stukkende plekke en sere.

Kan mens gehelp word as jy Tik gebruik?

Natuurlik kan verslaafdes gehelp word om sonder Tik klaar te kom. Maar, as mense eers verslaaf is, is dit baie moeilik om op te hou en nog moeiliker om alleen te probeer ophou.

Die goeie nuus is dat daar mense en organisasies is wat mense wat Tik gebruik kan help om op te hou. Praat met 'n onderwyser, die mense by die daghospitaal of 'n predikant wat sal weet waar en hoe om so iemand te help.

Onderaan hierdie pamflet is 'n lys van organisasies met opgeleide personeel wat mense met 'n Tikprobleem kan help. As jy hulp wil hê met jou Tikgebruik of bekommerd is oor 'n maat of familielid, kan jy hulle direk skakel en 'n afspraak maak.

En natuurlik moet ons ook vir die Here vra om ons te help. Hy kan regtig help! En Hy wil graag.

Wat kan ons doen om Tik te keer?

Tik verwoes mense se lewens en ons moet alles doen om te help dat mense nie Tik gebruik nie. Daar is 'n ou, maar baie waar gesegde: *Voorkoming is werklik beter as genesing.*

- Moet nooit eers begin om dit te gebruik nie!
- Sê nee as 'n maatjie of iemand anders jou uitdaag om dit die eerste keer te probeer. Jy is nie *chicken* of 'n lafaard as jy nee sê nie – dis dapper om nee te sê.
- Bly weg van mense wat Tik gebruik.
- Bly weg van plekke of partytjies waar mens dwelms kry.
- Ons moet wakker wees en gevare betyds probeer raaksien.
- Ons moet ons ouers vertel van ons vriende of van ander mense wat dwelms uitdeel.
- Ons moet omgee vir mekaar en mekaar help waar ons kan.
- Ons moet naby aan Jesus lewe – as ons vir Hom lief is en doen wat Hy vra, sal dit goed gaan met ons. Hy sal sorg. Dit belowe Hy in sy Woord:

Psalm 145:14: Die Here help almal op wat geval het. Hy ondersteun die wat bedruk is.
Psalm 116:5: Die Here is genadig en regverdig, ons God ontferm Hom oor ons.
Psalm 103:12: So ver as die ooste van die weste af is, so ver verwyder Hy ons oortredinge van ons af. Soos 'n vader hom ontferm oor sy kinders, so ontferm die Here Hom oor die wat Hom dien.

Kry hier hulp:

- SANCA - 0861 4 SANCA (0861 472 622)
- BADISA - (vra vir die nommer van die kantoor naaste aan jou) - 021 957 7130
- Narcotics Anonymous - 083 900 MY NA (083 900 69 62)
- Praat met 'n onderwyser, predikant of pastoor, iemand by die kliniek of maatskaplike werker.

PSG GROEP BEPERK

SANCA WESTERN CAPE

CLF
AFR 141

© Christelike Lektuurfonds
Privaatsak X19 Wellington 7654
☎021 873 6964 📠 021 864 3678
info@clf.co.za 🖥www.clf.co.za
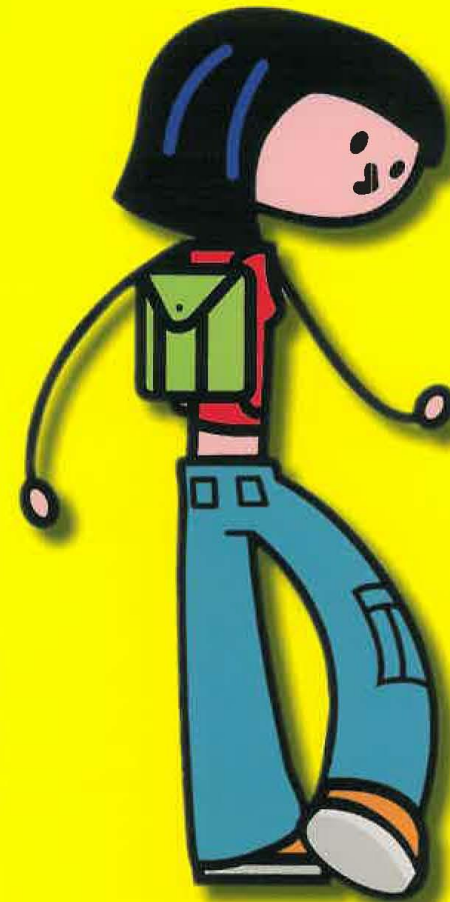
Tik is nie vir my nie

Jy het seker al van Tik gehoor? Dit is 'n baie gevaarlike dwelmmiddel met die chemiese naam Metamfetamien. Dit word ook *crystals*, *speed*, *straws* en *globes* genoem en lyk meestal soos wit, half-deurskynende glasstukkies of 'n poeier. Dit word soms in kort stukkies koeldrankstrooitjies of banksakkies verkoop en dan in 'n gloeilamp of spesiaal gemaakte glaspypie gerook. Tik is vreeslik maklik om in die hande te kry - al is dit een van dié gevaarlikste dwelmmiddels. En, as jy eers eenmaal daarvan gebruik het, kan jy dadelik daaraan verslaaf raak. En dan sal jy enigiets doen om dit in die hande te kry.

"Ek het nog net een keer in my lewe Tik gerook. Eers het dit soos gebrande plastiek geproe, maar net vir 'n paar sekondes. Toe was dit net... lekker. Ek het glad nie sleg gevoel nie. Hoewel ek dit nie besef het nie, het ek vreeslike goed begin doen. Ek onthou hoe ek en my vriend van een kitsbank na die ander gejaag het om geld te kry vir nog Tik. Hoe ons by plekke was waar mense *guns* op ons getrek het. Ons het stilgehou en nog Tik gerook. My hande was gebrand van die rokery... Ek het gesien hoe my vriend met mense baklei oor R300 se Tik en amper geskiet word. Op een of ander manier het ek by die huis gekom. En toe kom ek agter iets is fout... my hele lyf was seer. My spiere het gekramp, dit was selfs seer om asem te haal. Ek het gesweet en dit het gevoel of my lyf gaan ontplof. Ek het goed gesien wat nie werklik daar is nie. Skaduwees van klein mannetjies wat rondhardloop, miljoene spinnekoppe en goggas wat teen die mure sit én lyk of hulle smelt. Ek was so dors, maar water het soos petrol geproe. Ek het probeer slaap. Eers 'n hele dag later kon ek aan die slaap raak maar die hele tyd deurmekaar drome gehad. Toe ek wakker word, moes ek na 'n ander dorp ry. Eers was ek ok, maar toe begin ek paniekerig raak. Dit het gevoel of my hart wil ontplof in my bors en asof ek enige oomblik gaan flou raak. Ek het gedink as ek iets eet sal ek beter voel en het by 'n kafee langs die pad gestop. Terwyl ek eet voel ek hoe seer my mond is. Daar was klein wit blasies in my mond. Na nog 'n nag se slaap het ek begin beter voel. Nou, selfs 'n jaar na die aand voel ek nog nie heeltemal myself nie. En die ergste van alles is dat ek so skaam voel oor wat ek daardie aand gedoen het. Goed wat ek nie eers oor kan praat nie. Moenie Tik gebruik nie – op die beste kan jy miskien 'n slegte ervaring soos ek hê wat jou vir ewig gaan bybly of na slegs een keer se gebruik kan jy verslaaf raak en dan verloor jy alles..."

Wat gebeur as iemand Tik gebruik?

- Jy praat baie;
- jy voel vir'n rukkie daarna 'lekker';
- jy kan nie stilsit nie;
- jy voel baie selfversekerd;
- jy bly baie lank, selfs vir dae wakker;
- jy raak nie eintlik honger nie.

En as die Tik uitgewerk is?

- Begin sleg voel;
- is skoorsoekerig;
- is senuweeagtig;
- is opvlieënd;
- raak sommer vir niks kwaad nie;
- voel ongelukkig en depressief;
- wil sommer net lê en niks doen nie.

En dan begin die bose kringloop maar weer. Die persoon raak weer lus vir Tik om weer beter te kan voel. Maar elke keer as die Tik uitgewerk is, voel hulle net slegter as die vorige keer.

Verslawing

Tik is verslawend. Selfs al wil jy ophou, kan hulle dit nie regkry nie. Jy wil ook meer Tik gebruik om dieselfde gevoel as die eerste keer te kry. Jy begin ook skuldig voel en jok vir ander mense oor jou Tikgebruik. Dit is alles tekens van verslawing.

Maar hoekom is Tik sleg vir jou?

As iemand aan Tik verslaaf is kan dit sy of haar hele lewe negatief beïnvloed.

Skool

- Jy gaan sommer nie meer skool toe nie. Jy doen nie jou huiswerk nie. Jy raak sommer in die klas aan die slaap en wil niks met jou vorige maats te doen hê nie.

Ouers en familie

- Vloek en skel op ouers en ander mense;
- neem goed wat nie aan hulle behoort nie;.
- kom baie laat by die huis;
- sluit hom/haar in sy kamer toe;
- eet nie meer saam met die gesin nie;
- kom nie tot ruste as ander gaan slaap nie.

Gedrag en voorkoms

- Humeurig en skoorsoekerig;
- hou hom/haar eenkant;
- slordig en onnet op klere en hom/haarself;
- kan nie meer op hom/haar staatmaak nie;
- dink dat mense hom/haar agtervolg of sonder rede slegsê en beledig;
- verhoudings met verkeerde maats.

Gesondheid

- Verloor gewig.
- kry sere op arms, bene of gesig;
- slegte asem, seertjies in mond en swak tande;
- hoes dikwels en sukkel met 'n toe bors;
- droë vel;
- voortdurende kopseer.

Tik verander mense se voorkoms onherkenbaar.

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Addendum E – *Tik* - What are the facts?

ever they may last for several months and is marked by severe depression, low energy levels, craving and anhedonia (inability to experience any pleasure).

TIPS FOR EMPLOYERS - LOOK OUT FOR:

- Discarded, blackened foil paper or light bulbs minus the metal fitting,
- Bulbs being removed from buildings, vehicles
- Compulsive, senseless behaviour, eg, repeatedly cleaning work areas, disassemble or sort objects.
- Theft of small valuables
- Short stubs of cool drink straws in toilets, factory floor or locker rooms
- Emotional trauma/ high absenteeism rate among female employees (mothers of Tik users)

IF YOU CAN'T PREVENT IT, MANAGE IT:

- Draft and circulate a company position paper outlining proposed preventative and interventive strategies
- Consider the introduction of drug screening tests
- Conduct a general awareness initiative through poster/media displays
- Conduct Tik education programmes for employees
- Run a brief Management orientation regarding identification and management of intoxicated, dependant employees.
- Arrange screening, assessment and referral with external service provider.
- Consider conducting an in-house support group for parents of Tik users or recovering Tik addicts.

For practical guidance on any of the above, please contact: Tertius Cronje at 021 945 4080 or via e-mail: tertius@sancawc.co.za.
For any other enquiries, send an e-mail to sanca@sancawc.co.za or phone 021 945 4080.

WHERE TO FIND HELP:

- SANCA (WC) Bellville 021 945 4080
- Athlone.....................................021 638 5116
- Atlantis......................................021 572 7461
- Khayelitsha...............................021 364 6131
- Mitchell's Plain.........................021 397 2196
- Paarl...021 872 9671
- Tygerberg.................................021 919 9557

For more information on SANCA (WC) counseling and prevention services regarding Tik and other substances, please visit our website at www.sancawc.co.za

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SANCA WESTERN CAPE

South African National Council on Alcoholism & Drug Dependence WC

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SANCA
Western Cape
Providing Substance Abuse Solutions

Tik
What are the facts?

WHAT IS TIK ?

TIK is a slang name given to the stimulant drug, Methamphetamine. This drug is a much more potent version of its parent drug, amphetamine.

Also known as speed, ice, crank, crystal straws, chalk or tjoef, the drug usually appears as white or semi-transparent, odorless, bitter-tasting crystals or powder which may have slight colour variations

During the period April 2006 to March 2007, 42% of cases seen at SANCA (WC) offices in Cape Town were Tik related, compared to 27% of alcohol and 17% of Dagga cases.

HOW IS THE DRUG USED?

The most common way of using the drug is by smoking. This is done with a custom made glass pipe or by heating the crystals inside a light bulb and inhaling the dense odorless smoke. Users also use aluminum foil for this purpose. The smoked drug reaches the brain in about 6 seconds.

Tik can also be snorted, ingested orally or injected under the skin, but the latter is a hazardous habit which can cause painful abscesses.

SHORT TERM EFFECTS

The effects may vary depending on the amount taken and how the drug was taken. Generally, the stimulatory effects include many readily observable symptoms:

- Increased wakefulness and alertness
- Increased physical activity – jerky movements and fast reflexes
- Rapid speech
- Irritability, aggression and argumentative
- Loss of appetite
- Dry mouth
- Open, staring eyes with dilated pupils
- False sense of confidence and power
- Repetitive mannerisms like shrugging or tugging at shirt buttons

The less observable, physical effects include: High blood pressure, increased heart rate, dilated pupils and dry mouth and increased body temperature.

As the high starts to wear off, the user may experience pronounced negative effects such as irritability, extreme tiredness, anxiety and aggression.

LONG TERM EFFECTS

It is common for casual users to start 'binging' on Tik, that is, smoking or injecting more of the drug as soon as the effects starts to wear off.

Tolerance rapidly develops so that the user needs to increase the dosage to experience the same effects. Continued use is however a dead-end street: Each time the user smokes or injects more of the drug, a smaller rush than the initial one is experienced until, finally, there is no rush and no high.

Long term use produces intense psychological addiction characterized by compulsive drug seeking and drug use, accompanied by changes in brain chemistry.

Some long-term effects of Methamphetamine use:
- Violent and aggressive behaviour
- Anhedonia (little or no pleasure derived from former enjoyable activities)
- Tooth decay and sores inside the mouth
- Lung disorder
- Weight loss and malnutrition
- Sleep disturbances
- Cardiac problems: inflammation of heart lining, damaged blood vessels
- Psychosis: Intense paranoia, suicidal thoughts, delusions (eg the sensation of insects crawling under the skin)
- Sores on the face, poor complexion
- Marked general physical deterioration

ANY EVIDENCE OF DAMAGE TO THE BRAIN?

Researchers have reported as much as 50% of the dopamine producing cells in the brain can be damaged after long exposure to relatively low levels of this drug. Dopamine is a chemical which plays a crucial role in our ability to experience pleasure. Some studies have confirmed that these cells partially re-grow upon abstinence.

WITHDRAWAL

Withdrawal from Tik usually has a slow onset, with no notable immediate physical distress. Sometimes withdrawal may only start 2 weeks after abstinence. How-

Repetitive rubbing causes sores

Addendum F – Traditional Brochure

LANGTERMYN-GEVOLGE SLUIT IN:

• Gewelddadige en agressiewe gedrag
• jy ervaar geen meer plesier van aktiwieite wat jy voorheen baie geniet het nie.
• Vrot tande
• Sere in die mond en op die lyf
• Longkwale
• Jou liggaam gaan agteruit en lyk gou oud
• Hart probleme
• Gewigsverlies en wanvoeding
• Slaap versteurings
• Psigose: Dit beteken dat jy byvoorbeeld valse oortuigings kan hê dat jy heeltyd in gevaar is of dat mense jou iets wil aandoen; dat jy selfmoord gedagtes kan ontwikkel; jy dinge sien of hoor wat nie bestaan nie; of dat jy dinge ervaar wat nie werklik is nie (byvoorbeeld die gevoel dat insekte onder jou vel kriewel).
• Skade aan die brein

HOE KEER ONS TIK?

• Moet net nooit begin om tik te rook nie!
•Sê net nee of loop weg as iemand vir jou tik aanbied
•Vermy vriende wat tik gebruik
•Bly weg van plekke of situasies waar jy weet of vermoed mense tik gebruik of verkoop.
•Vertel jou ouers of die polisie van mense wat tik uitdeel of verkoop.

KRY HIER HULP:

•SANCA – 0861 4 SANCA (0861 472 622)
•BADISA – 021 957 7130
•Narcotics Anonymous – 083 900 MY NA (083 900 69 62)
•Praat met 'n onderwyser, predikant of pastoor, iemand by die kliniek, 'n maatskaplike werker of iemand wie jy vertrou.

Is dit die moeite werd om met jou lewe te dobbel?

TIK

WAT IS DIE FEITE?

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WAT IS TIK?

Tik is 'n wit, reuklose, kristal-agtige stof wat soos half-deurskynende glasstukkies lyk. Dit is 'n baie gevaarlike dwelmmiddel met die chemiese naam Metamfetamien. Dit word ook *crystals*, *speed*, *straws* en *globes* genoem.

HOE WORD TIK GEBRUIK?

Tik word gewoonlik in 'n gloeilamp of 'n glaspypie gerook, die sogenaamde "tik-lollie". Die kristalle word verhit in die bol/pypie en word dan ingeasem. Tik kan egter ook ingesluk word, ingespuit of gesnuif word. Dit veroorsaak 'n onmiddellike, intensiewe "high".

WAAROM IS TIK GEVAARLIK?

Jy ervaar aanvanklik aangename gevoelens as jy tik gebruik. Dit is as gevolg van 'n verhoging in die produksie van dopamien, 'n chemiese stof in jou brein. Jou liggaam pas dan aan by hierdie verhoogde vlakke van dopamien. Dit beteken dat hierdie verhoogde vlakke van dopamien nou die nuwe normale hoeveelheid dopamien word wat jou liggaam op 'n gereelde basis produseer.

Jou liggaam vervaardig dus nou meer dopamien as wat dit aanvanklik vervaardig het voor jy vir die eerste keer tik gebruik het. Dit het tot gevolg dat, as jy weer dieselfde aangename gevoelens wil ervaar die volgende keer wat jy tik gebruik, jy meer tik sal moet gebruik. Jy moet dus elke keer wat jy tik gebruik groter hoeveelhede inneem om weer dieselfde aangename gevoelens te ervaar. Dit veroorsaak dat jy dus baie maklik verslaaf kan raak aan tik. Groot hoeveelhede tik wat op eenslag ingeneem word kan baie gevaarlik of selfs noodlottig wees as gevolg van die onvoorspelbare aard van hierdie dwelmmiddel.

KORTTERMYN-GEVOLGE SLUIT IN:

• Ongewone energie (kan nie stilsit nie)
•Herhalende maniere (byvoorbeeld die gedurige gepluk aan hempsknope)
• Jy bly baie lank wakker
• Vinnige spraak en baie pratery
•Snaakse bewegings
• Droë mond
• Dit maak jou geïrriteerd, aggressief en stryerig
• Jy raak nie honger nie
• Valse selfvertroue en gevoelens van mag
• Verhoogde, onbeheerbare seksdrang wat tot onveilige seks of verkragting kan lei.
• Starende oë met vergrote pupille

EN AS DIE TIK BEGIN UITWERK?

Die tik-gebruiker kan dan:
• baie sleg voel
• baie angstig of senuweeagtig voel
• skoorsoekerig en opvlieënd wees
• vir geen rede kwaad word nie
• ongelukkig en depressief voel

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Addendum G – Questionnaire (fotonovela condition)

SPYT KOM TE LAAT

VRAELYS

INSTRUKSIES:

1. Lees asseblief die boekie, *Spyt kom te laat*, rustig deur. Voltooi dan die vraelys.

2. Ek wil graag presies weet wat u dink en hoe u voel. Daarom moet u asseblief so **eerlik** moontlik wees wanneer u die vraelys voltooi. Dit is baie belangrik!

3. Onthou om asseblief al die vrae te voltooi.

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INFORMASIE OOR U SELF

1. **Dui u geslag aan (trek 'n kruisie in die gepaste blokkie):**

   ☐ Man   ☐ Vrou

2. **Dui u ouderdom aan (vul asseblief u ouderdom in):**

   Ek is _____jaar oud.

3. **Dui aan hoe ver u geleer het (trek 'n kruisie in die gepaste blokkie):**

   ☐ Ek is nog op skool

   ☐ Ek is voor Standerd 8 (Graad 10) uit die skool uit

   ☐ Ek het Matriek (Standerd 10/Graad 12) geslaag en/of ek het 'n Diploma of Graad kwalifikasie na skool verwerf

4. **Waar bly u? (trek 'n kruisie in die gepaste blokkie):**

   ☐ Calvinia   ☐ Ceres/Prince Alfred's Hamlet   ☐ Swellendam   ☐ Bredasdorp

HOE OM DIE VRAE IN HIERDIE VRAELYS TE VOLTOOI

1. Elke vraag bestaan uit 'n kort sin wat u moet lees en dan oordink.

2. U moet dan vir ons aandui wat u dink van hierdie sin.

3. U doen dit deur 'n kruisie te trek in een van die blokkies wat verskaf word wat die meeste ooreenstem met wat u dink van hierdie sin.

4. Hier is 'n voorbeeld van hoe 'n vraag kan lyk:

	Ek stem beslis nie saam nie	Ek stem nie saam nie	Ek is neutraal	Ek stem saam	Ek stem beslis saam
Die WP rugbyspan gaan die Curriebeker in 2015 wen.	☐	☐	☐	☐	☐

5. Gestel u dink die WP rugbyspan gaan die Curriebeker in 2015 wen, maar voel nie so sterk daaroor nie. Dit sal beteken dat u 'n kruisie in die tweede laaste blokkie sal trek, soos volg:

	Ek stem beslis nie saam nie	Ek stem nie saam nie	Ek is neutraal	Ek stem saam	Ek stem beslis saam
Die WP rugbyspan gaan die Curriebeker in 2015 wen.	☐	☐	☐	☒	☐

6. Gestel u dink dalk eerder die WP rugbyspan staan beslis <u>geen</u> kans om die Curriebeker in 2015 te wen nie. Dit sal beteken dat u 'n kruisie in die eerste blokkie sal trek, soos volg:

	Ek stem beslis nie saam nie	Ek stem nie saam nie	Ek is neutraal	Ek stem saam	Ek stem beslis saam
Die WP rugbyspan gaan die Curriebeker in 2015 wen.	☒	☐	☐	☐	☐

7. Onthou om net een blokkie per vraag te merk. Nou is u reg om met die vraelys te begin!

<u>Vraag 1</u>

	Ek stem beslis nie saam nie	Ek stem nie saam nie	Ek is neutraal	Ek stem saam	Ek stem beslis saam
a) Ek sal nie tik in die toekoms gebruik nie.	☐	☐	☐	☐	☐
b) Ek beplan om binnekort met 'n familielid of 'n vriend wat met tik deurmekaar is oor hul tikgebruik te praat.	☐	☐	☐	☐	☐

<u>Vraag 2</u>

	beslis nie sterk oor voel nie	nie sterk oor voel nie	neutraal oor voel	sterk oor voel	beslis sterk oor voel
a) Om <u>nooit</u> tik te gebruik <u>nie</u>, is iets waaroor ek...	☐	☐	☐	☐	☐

	beslis nie dink sal help nie	nie dink sal help nie	neutraal oor voel	dink sal help	beslis dink sal help
b) Om met 'n familielid of 'n vriend wat met tik deurmekaar is oor hul tikgebruik te praat , is iets wat ek...	☐	☐	☐	☐	☐

Vraag 3

Dui aan of u dink die volgende stellings waar of onwaar is.

	Waar	Onwaar
a) Tik maak dat jy ouer lyk as wat jy werlik is.	☐	☐
a) Tik maak jou aggressief.	☐	☐
b) Tik maak dat jy dink mense is vriendelik en goedgesind teenoor jou.	☐	☐
c) Tik maak dat jy onverantwoordelike dinge doen.	☐	☐
d) Tik maak dat jou tande sleg word.	☐	☐
e) Tik maak dat jou seksdrang afneem.	☐	☐
f) Tik maak dat jy jouself allerhande dinge verbeel.	☐	☐

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Vraag 4

	Ek stem beslis nie saam nie	Ek stem nie saam nie	Ek is neutraal	Ek stem saam	Ek stem beslis saam
a) Ek kan myself maklik daarvan weerhou om tik te gebruik.	☐	☐	☐	☐	☐
b) Ek kan maklik nee sê vir iemand wat my tik aanbied om te gebruik.	☐	☐	☐	☐	☐

Vraag 5

	Ek stem beslis nie saam nie	Ek stem nie saam nie	Ek is neutraal	Ek stem saam	Ek stem beslis saam
a) Dit is moontlik dat ek in die toekoms tik sal gebruik.	☐	☐	☐	☐	☐
b) Ek glo dat die skadelike gevolge van tikgebruik 'n ernstige gesondheidsprobleem is.	☐	☐	☐	☐	☐

Vraag 6

Dink aan hoe die storie en karakters van die storie u laat voel het terwyl u die storie gelees het. Beantwoord dan die volgende vrae.

	Ek stem beslis nie saam nie	Ek stem nie saam nie	Ek is neutraal	Ek stem saam	Ek stem beslis saam
a) Ek het soms **bang** gevoel terwyl ek die storie gelees het.	☐	☐	☐	☐	☐
b) Ek het **bang** gevoel toe ek gelees het van die negatiewe dinge wat met Ricardo gebeur het omdat hy tik gerook het.	☐	☐	☐	☐	☐
c) Ek het **bang** gevoel toe ek oor die gevare van tik gelees het (byvoorbeeld dat dit jou brein kan beskadig, sere en letsels veroorsaak, ensovoorts.)	☐	☐	☐	☐	☐
d) Ek het soms **verbaas** gevoel terwyl ek die storie gelees het.	☐	☐	☐	☐	☐
e) Ek het soms **kwaad** gevoel terwyl ek die storie gelees het.	☐	☐	☐	☐	☐
f) Ek het soms **hartseer** gevoel terwyl ek die storie gelees het.	☐	☐	☐	☐	☐
g) Ek het soms emosioneel **diep geroer** gevoel terwyl ek die storie gelees het.	☐	☐	☐	☐	☐

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Vraag 7

	Ek stem beslis nie saam nie	Ek stem nie saam nie	Ek is neutraal	Ek stem saam	Ek stem beslis saam
a) Ek dink ek verstaan watter tipe mens Ricardo is.	☐	☐	☐	☐	☐
b) Ek het gevoel dat ek presies geweet het waardeur Ricardo in die storie gegaan het.	☐	☐	☐	☐	☐
c) Ek dink ek verstaan watter tipe mens Anja is.	☐	☐	☐	☐	☐
d) Ek het gevoel dat ek presies geweet het waardeur Anja in die storie gegaan het.	☐	☐	☐	☐	☐

Vraag 8

	Ek stem beslis nie saam nie	Ek stem nie saam nie	Ek is neutraal	Ek stem saam	Ek stem beslis saam
a) Ek wou graag weet hoe die storie eindig.	☐	☐	☐	☐	☐
b) Terwyl ek die storie gelees het, het ek net aan die storie gedink en niks anders nie.	☐	☐	☐	☐	☐

Vraag 9

	Ek stem beslis nie saam nie	Ek stem nie saam nie	Ek is neutraal	Ek stem saam	Ek stem beslis saam
g) Terwyl ek die storie gelees het, het ek saamgestem met die dinge wat in die storie gebeur het.	☐	☐	☐	☐	☐

Vraag 10

	Ek stem beslis nie saam nie	Ek stem nie saam nie	Ek is neutraal	Ek stem saam	Ek stem beslis saam
a) Ricardo dink op dieselfde manier as wat ek dink.	☐	☐	☐	☐	☐
b) Ricardo is baie soos wat ek is.	☐	☐	☐	☐	☐
c) Anja dink op dieselfde manier as wat ek dink.	☐	☐	☐	☐	☐
d) Anja is baie soos wat ek is.	☐	☐	☐	☐	☐

Vraag 11

LET OP! BEANTWOORD <u>EERS</u> HIERDIE VRAAG WANNEER ONS VIR U <u>SÊ</u> OM DIT TE DOEN!!!

	Ek verkies *Spyt kom te laat*	Ek is neutraal	Ek verkies 'n brosjure
a) Verkies u om 'n boodskap oor tik in die vorm van 'n boekie soos *Spyt kom te laat* te lees, of eerder in die vorm van 'n brosjure?	☐	☐	☐

&&&&&&&&&&&&&&&&&&&&&&&&&&&   **EINDE VAN DIE VRAELYS**   &&&&&&&&&&&&&&&&&&&&&&&&&&&