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Autoreferát disertační práce



Obraz duševních onemocnění v tištěných médiích ve třech středoevropských zemích

The picture of mental illness in the print media in three central European countries

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Disertační práce bude nejméně pět pracovních dnů před konáním obhajoby zveřejněna k nahlížení veřejnosti v tištěné podobě na Oddělení pro vědeckou činnost a zahraniční styky Děkanátu 1. lékařské fakulty.

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Abstrakt

Pro veřejnost představují média nejdůležitější zdroj informací o duševních onemocněních. Je známo, že mediální prezentace lidí s duševními poruchami jsou často negativní a přispívají tak k jejich stigmatizaci. Na druhou stranu, média mohou hrát významnou roli při snižování míry stigmatizace, a to poskytováním adekvátních informací o tomto tématu a zapojováním se do antistigmatizačních kampaní. Až dosud nebyl vyvinut žádný standardizovaný nástroj k měření stigmatizace duševních onemocnění v tištěných médiích, který by používal operacionalizované definice. V rámci našeho projektu jsme si stanovili dva cíle: a) vytvoření standardizovaného a objektivního nástroje k měření stigmatizace duševních onemocnění v tištěných médiích, b) provedení analýzy obsahu mediálních sdělení o duševních onemocněních ve vztahu ke stigmatizaci v českém, chorvatském a slovenském tisku. Vytvoření nástroje „Picture of Mental Illness in Newspapers“ (PICMIN) bylo založeno na principech obsahové analýzy, což je výzkumná technika umožňující vyvozování platných a replikovatelných závěrů z textu. Uvedený nástroj se skládá z jedenácti popisných a pěti analytických kategorií. V rámci naší studie jsme došli k těmto závěrům: ve všech třech zemích bylo zjištěno vysoké zastoupení článků se stigmatizujícím obsahem, v četnosti uvádění stigmatizujících obsahů dominoval bulvární tisk, články s vyšším počtem slov mají menší stigmatizační potenciál. Schizofrenie a poruchy příjmu potravy jsou ve člancích zastoupeny více, než odpovídá jejich skutečné prevalenci ve sledovaných zemích, naopak úzkostné poruchy a demence jsou zastoupeny méně. Mezi největší prediktory pozitivního vyznění článku patří uvedení názoru odborníka na duševní zdraví nebo odkaz k vědeckému výzkumu. Sdělení uvádějící duševní poruchy v souvislosti s agresivitou tvořily třetinu všech článků. Vražda byla nejčastěji uváděna v souvislosti s psychotickými poruchami, zatímco afektivní poruchy byly nejčastěji spojovány s dokonanou sebevraždou. Velká většina článků vztahujících se k násilí popisovala osoby s duševním onemocněním jako pachatele. Mediální prezentace duševních onemocnění se v jednotlivých zemích do značné míry liší, ale je obecně nízké kvality. Již bylo zahájeno několik aktivit, které by měly upevnit spolupráci mezi odborníky v oblasti duševního zdraví a novináři (např. poskytování rozhovorů do tisku, oslovení novinářů prostřednictvím tiskové konference, cena za nejkvalitnější článek týkající se problematiky duševního zdraví). Cílem je zlepšit způsob prezentace tematiky duševního zdraví v médiích, minimalizovat potenciální diskriminační praktiky a podpořit tak osoby s duševním onemocněním ve vyhledávání odborné pomoci.

Abstract

Media are considered to be the public's primary source of information regarding mental illness. Evidence suggests that media representations of people with psychiatric disorders are frequently negative and contribute to their stigmatization. On the other hand, media can play an important role in reducing this stigmatisation by providing adequate information about this topic and engaging in antistigma campaigns. Up to now there was no standardised measurement of the stigma of mental illness in print media using clearly operationalized definitions. The objectives of this project were twofold; to develop a standardised and objective instrument to measure stigma of mental illness in print media; and to conduct an analysis of the current coverage on mental health/illness issues in Czech, Croatian, and Slovak print media. The development of the Picture of Mental Illness in Newspapers (PICMIN) instrument was based on the principles of content analysis, a research technique for making replicable and valid inferences from text to the context in their use. The instrument consists of eleven descriptive and five analytical categories. The most interesting findings based on the analysis of media representations of mental illness were; a similarly high level of stigmatizing articles across countries, clearly exceeding the ones with destigmatizing statements; domination of tabloids in stigmatizing content; longer articles having much lesser stigmatizing potential; overrepresentation of schizophrenia and eating disorders and underrepresentation of anxiety disorders and dementia when comparing the correlation of their actual rate in the populations; the greatest predictor of positive outcome being a reference from a scientific survey and from a mental health professional; homicide being most frequently mentioned in the context of psychotic disorders, while affective disorders being most frequently associated with completed suicides; the proportion of articles depicting mental disorders together with aggressive deeds constituting one-third of all articles; the vast majority of articles with violent content presenting mentally ill people as perpetrators. Coverage of mental health/illness issues differs to large extent across countries, but is generally of poor quality. Several activities that should tighten together the mental health and media professionals have already been initiated (e.g. interviews have been given to the newspapers, journalists have been approached via press conferences, a prize for the best article on the issue of mental health/illness in the print media) in an ultimate effort to improve media coverage of mental illness issues, thus minimizing potential discriminatory practices and increasing help-seeking behavior.

1. Theoretical background

1.1. Introduction

The media rank among the essential and constituent institutions of modern society (Marada, 2002). From the beginning their significant role in influencing public attitudes and opinions was pointed out, and considered to be a major benefit as well as a danger (Jiráček & Köpplová, 2003). Broadcast and print media are considered to be the *public's primary source of information regarding mental health/illness* (Anderson, 2003). Media tend to mention this issue with surprising frequency (Coverdale et al., 2002). The recurrent theme of mental disorders in the media and the way it is presented, affects the shaping of the social representation of the mentally ill in the society. In addition, some studies suggest that people tend to be more influenced by the media coverage of mental disorders than by their personal experience of them (Rose, 1998).

1.2. The portrayal of mental disorders in the print media

The media coverage of mental disorders became a major focus of interest in the second half of the 20th century. The first major work addressing this topic was published by Nunnally in 1961. It concluded that the portrayal of mental disorders in the media is generally negative and that the news predominantly depicts bizarre symptoms of mental disorders (Meagher et al., 1995).

Prompted by the assumption that the negative media image of people with mental illnesses results in the retention and reinforcement of their negative social representation in the eyes of the general public, professionals worldwide began exploring this issue (Corrigan et al., 2005; Olstead, 2002; Wahl, 2000). Numerous studies point out that *the portrayal of mental disorders in the press is problematic, negative, inconsistent with reality* (Coverdale et al., 2002; Huang & Priebe, 2003); and often *tends to highlight their bizarre features* (Hazelton, 1997).

Few relevant investigations have been conducted in Central and Eastern Europe. A Serbian study of the representations of mental illness in the press found that depictions of mental illness were considerably negative, presenting people with mental illness as dangerous and as victims of their health conditions (Bilic & Georgaca, 2007). In the Czech Republic the systematic analysis of the mental illness issues in the press was conducted in the 70's by Janík and Kubíčková (1975). They concluded that addictive disorders and personality disorders were among the most frequently mentioned diagnosis, while less frequent were reports of affective or psychotic disorders. Recently, these issues

were investigated mainly in relation to the image of drug abuse and drug users in the print media (Grohmannová, 2006; Miovska et al., 2008).

1.3. Mental disorders and aggression in the print media

Mass media representations of people with psychiatric disorders, in particular those with substance abuse and schizophrenia, tend to emphasize *violence, dangerousness, and criminality* (Cutcliffe & Hannigan, 2001). Several studies also repeatedly confirmed that many depictions convey a greatly exaggerated connection between mental illness and aggressive behavior (Olstead, 2002; Slopen et al., 2007). In a U.S. study, **39% of the articles** under scrutiny referred to dangerousness and violent acts on the part of individuals with a mental disorder (Corrigan et al., 2005). Similar conclusions were drawn by Ward (1997) in a U.K. study in which **46% of the articles** covering people with a mental disorder *referred to crime and dangerous behavior* towards others and themselves.

1.4. Consequences of negative media depictions of people with mental illness

Numerous studies have documented an association between negative media portrayals of people with mental illness and the public's negative attitudes (Angermeyer & Matschinger, 1996; Philo, 1996), and have concluded that *stigmatizing presentations have a direct negative impact* on individuals living with mental illness (Corrigan, 2004) as well as on social policies (Cutcliffe & Hannigan, 2001).

1.5. Media interventions to tackle stigmatisation of mental disorders

While contributing to stigmatisation on one hand, the media can also play an important role in preventing it. In this respect, the media are used for so-called *antistigma campaigns*, mostly involving educational activities (Arboleda-Floréz et al., 1996). Interventions seeking to bring a change in the form and content of the coverage of people with mental illness, conceived as *recommendations for the journalists*, constitutes another approach (Samaritans, 2008).

1.6. Situation in the Czech Republic, Slovak Republic and Croatia

The Czech and the Slovak Republic do share a long history of psychiatry and mental health care. During the communist era of 1948 – 1989, the health care system was nationalized and patients did not have free choice of a specialist or treatment facility. No civic movements or non-governmental organizations (NGOs) existed to provide

advocacy, promotion, or prevention. The main political, social, and administrative changes after the “Velvet Revolution” in November 1989 provided the basis for creation of new mental health policies, which enabled attempts to address stigma (Dragomirecka et al., 2008; Vevera et al., 2005).

Several attempts have been made to assess the scope of the problem and a number of stigma prevention programs have been presented. Among the most important belong the initiative Stop stigma and NGOs like Fokus, o.s., Sympathea, o.s. and ESET-HELP, o.s. which *provide a wide range of destigmatization activities* from educational programs for the public to sheltered workplaces for the people with mental illnesses (Motlová et al., 2008; Pěč, 2012). The League for Mental Health is a leading NGO active in mental health promotion and protection in the Slovak Republic (Liga za duševné zdravie, 2008). Another Slovak national organization, Open the door open your hearts, implements the anti-stigma program of the World Psychiatric Association (WPA) (Sartorius, 2005). In *cooperation with the media*, this program included interviews with patients and their relatives appearing in newspapers and on television (Nawka, 2005).

Croatia has a very similar socio-cultural and historical background of psychiatry and mental health care to the Czech and Slovak Republics. Since 1991, thorough transitional changes took place and brought vast socioeconomic, political and cultural changes. These changes also affected overall health issues and mental health issues as well. Ten percent of the adult population are war veterans who suffer from psychiatric problems, especially post-traumatic stress disorder (Komar & Vukusic, 1999). Recent findings report *a high level of stigma towards mental illness in Croatia* (Arbanas, 2008), but despite these findings the Croatian government has still not accepted international standards of anti-stigma programs from the World Health Organization (WHO) or WPA. Therefore anti-stigma programs are mostly provided by NGOs or psychiatric associations (e.g. establishment of a Center for Mental Health at the Health Centre Zagreb and Croatian Center for Rehabilitation in Community) (Health development action for south-eastern Europe, 2009).

2. Research study objectives

Even though there has been an increased interest in the role of the print media in conveying negative attitudes towards people with mental illness (Allen & Nairn, 1997; Coverdale et al., 2002; Dietrich et al., 2006; Nairn et al., 2001; Wahl et al., 2002), *there was no standardised measurement of the stigma of mental illness in the print media*,

particularly for use in international studies using clearly operationalized definitions. Therefore the research team decided to develop one.

Objective 1

To develop a standardised and objective instrument to measure stigma of mental illness in the print media - PICMIN (Picture of Mental Illness in Newspapers).

Together with the development of the PICMIN instrument the research team aimed to compare the contents and tone of articles on mental health/illness in Czech, Croatian, and Slovak print media. An international comparison should moreover provide comprehensive information on representations of mental illnesses in the print media in each country, which can be a basis for targeted anti-stigma programs with respect to socio-cultural contexts.

Objective 2

To describe the current situation of the portrayal of mental health/illness issues in Croatian, Czech and Slovak print media using the PICMIN instrument. In particular, the goals were as follows:

- 1) To find out what is the global impression (level of stigmatization) of the articles dealing with mental health/illness.
- 2) To describe the association between psychiatric disorders and violence in the print media (which psychiatric disorders are depicted together with aggressive acts; what type of aggressive acts are mostly portrayed in articles depicting psychiatric disorders, and identification of the role of a person with mental illness in aggressive deeds).
- 3) To describe who are the sources of information mentioned in the articles; what types of mental disorders are described in the articles; and whether identifying information of mentally ill people are being revealed.
- 4) To perform a cluster analysis of the positive and negative statements from the articles.

3. Methodology of the research project

The development of the PICMIN instrument was based on the *principles of content analysis*, a research technique for making replicable and valid inferences from text to the context of their use (Kerlinger, 1972; Krippendorff, 2004).

3.1. Phases of the PICMIN instrument development

The research study was conducted in three phases (Rukavina et al., in press). The *pilot phase* included: a) development of the initial version of the instrument for measurement of stigma in print media, b) training of the coders, and c) testing the initial version of the instrument. The *intermediate phase* included: a) corrections of the instrument based on findings from the previous steps, b) training of coders and c) testing the corrected version of the instrument. Finally, the *main phase* included: a) development of the final version of the instrument and b) testing the final version of the instrument.

3.2. Study sample and keywords

The sampling for media content analysis comprises three steps (Newbold et al., 2002): a) selection of the media forms, b) selection of issues or dates and c) sampling of relevant content from within those media.

The pilot phase sample comprised articles pertaining to the topic of mental illness chosen from the *six most widely read daily newspapers* (broadsheets and tabloids) *and weekly magazines* in Croatia, the Czech Republic and Slovakia (Table 1). All articles were retrieved by national media retrieval agencies. They were taken from four one-week periods randomly selected from every three months throughout 2007, and one week randomly selected from the year 2007.

Table 1 The six most widely read daily newspapers (broadsheets and tabloids) and weekly magazines in Croatia, the Czech Republic and Slovakia

	Daily periodicals		Weekly periodicals
	Broadsheets	Tabloids	
Croatia	Glas Istre, Jutarnji list, Novi list, Slobodna Dalmacija, Večernji list	24 sata	Arena, Globus, Gloria, Lisa, Mila, Story
Czech Republic	Lidové noviny, Mladá fronta DNES, Právo	Aha!, Blesk, Šíp	Blesk pro ženy, Chvilka pro tebe, Katka, Nedělní blesk, Rytmus života, Svět ženy
Slovak Republic	Hospodárske noviny, Pravda, SME	Korzár, Nový čas, Plus jeden deň	Báječná žena, Nový čas pre ženy, Plus 7 dní, Rytmus života – SK, Trend, Týždeň

To identify relevant content of stigma of mental illness in the print media, *keywords* used for searching print media were divided into the two following groups: *neutral terms* (e.g. psychiatry, mental illness, psychotherapy, dementia, schizophrenia, antidepressant, bulimia); and *labelling terms*, where mental illness expressions are used as labels,

adjectives as opposed to nouns (e.g. schizophrenic, neurotic, alcoholic). The print media search was performed using the stem derivatives of defined keywords in singular and plural forms in all three languages.

Out of all articles obtained after setting the keywords, relevance sampling of the articles in which the subject of mental illness represented the relevant content; meaning that a keyword is presented in association with mental illness, either as a main subject of the article or sideline to another news story; was performed. The *pilot sample* consisted of **75 articles from Croatia, 203 articles from Czech Republic, and 172 articles from Slovakia.**

The study sample in the intermediate phase consisted of on-line articles available in the English language from the most read daily and weekly U.S. (United States of America) and U.K. (United Kingdom) print media. After the selection of the articles based on mental illness as the relevant content of the article, a total of **40 articles** comprised the *intermediate phase sample*.

The main phase study sample consisted of articles related to the topic of mental illness which were chosen from the six most widely read daily newspapers and weekly magazines in Croatia, the Czech Republic and Slovakia (Table 1). Again, all articles were retrieved by national media retrieval agencies. They were taken from 42 days (randomly selected six times each day of the week, thus constructing six composite weeks) in the period from April 1st 2009 to March 31st 2010. To identify relevant content, keywords used for searching the print media were divided into the three groups. The same neutral and labelling terms were used as in the initial phase of the project, in addition to that *pejorative terms*; madman, madhouse, lunatic, maniac, junkie, psychopath; were used. The sample for the main phase consisted of **238 articles from Croatia, 226 articles from Czech Republic, and 158 articles from Slovakia.**

3.3. Process of the development of the PICMIN instrument

The initial version of the instrument consisted of two groups “a priori” determined categories: descriptive categories and analytical categories. Categories were defined based on previous research of mental illness reporting in the media (Francis et al., 2001; Huang & Priebe, 2003; Wahl et al., 2002), through a consultation process with the project’s mentors and a discussion with mental health advocates and journalists.

Descriptive categories included the name of the article, date of issue, name of the media, type of the media, page, identification of neutral/labelling keywords, section, number of words in the article, types of disorders named and described, and sources of

information about mental illness. Disorders that were included generally corresponded to classifications from the 10th version of the International Classification of Diseases (ICD, 1993). *Analytical categories* described main issues such as sensationalism, aggression, global impression of the headline and global impression of the article, all of which were shown to be important in previous studies (Huang & Priebe, 2003; Wahl et al., 2002). In the category of “sensationalism” the focus was centered on both content and form of the article. Likewise, aggression was also assessed by two separate categories. In the category “aggressive behavior” the focus was directed on whether a person with mental illness was depicted as a perpetrator or a victim or both. In the second category, the particular type of aggressive act was identified. Assessment of the global impression of the article was evaluated according to the *presence of positive/negative statements* and was coded as negative, positive, mixed, or neutral. Each analytical category included a paragraph-long definition to facilitate coding.

In the intermediate phase researchers decided to *change some of the descriptive categories* in order to obtain more information from the articles’ content in future analyses. In the descriptive categories, the “crime story” (yes/no) *category was added*, the “section” category was changed into four possible codes (news, including politics, economics, sports or crime; healthcare/science; entertainment/celebrities and unrelated to any specific section); the “personal data” category, revealing the identity of the mentally ill person in the article, was also added to the instrument and the “disorder mentioned” category was broadened to specify child and adolescent psychiatric disorders, personality disorders and sexual disorders.

Several changes were made to the instrument from the pilot phase for the analytical categories including sensationalism content and style and global impression of the headline and the article. The initial version consisted of two categories related to sensationalism (content and style) which were *merged into one category* named “sensationalism”. The “aggressive act” category was renamed to “type of aggressive act” and broadened to include a code for threatening behavior including verbal aggression. Corresponding codes listing the methods used to commit suicide and attempted suicide were added. The terminology for coding the global impression was changed and researchers established *more precise defining criteria* for global impression of the headline and global impression of the article.

In the main phase coding for the “sensationalism” *category was broadened* into three possible codes (no, yes - low, yes – high) with defined criteria. The “type of aggressive act” category was broadened to include a code for sexual aggression (sub-

coded as sexual abuse of an adult, rape of an adult, sexual abuse of a minor, rape of a minor). In assessing the global impression of the article, the items were not evaluated according to the presence of “a priori” positive or negative statements, but with the use of the instrument, *coders extracted direct quotes* from the article or summarised the article’s tone and main emphasis.

3.4. Coding process and inter-coder reliability (ICR)

Each country recruited three coders who were trained mental health professionals (psychiatrist, psychiatric resident, or psychologist). Pilot phase articles were independently coded by three separate in-country coders. ICR of the pilot phase sample was determined for the descriptive and analytical categories of the instrument. The corrected version of the PICMIN instrument was tested by coding 40 articles in English by all nine coders. In the main phase, testing of the final version of the PICMIN instrument was performed again by three separate in-country coders.

3.5. Statistical analysis

ICR during testing the instrument’s initial, corrected and final versions was determined for the descriptive and analytical categories using the indices: *Average Pair-wise Percent Agreement* (APPA) and *Krippendorff’s α* (alpha) (Hayes & Krippendorff, 2007; Neuendorf, 2002). ICR was calculated with the ReCal (“Reliability Calculator”), an online utility that computes ICR coefficients (Freelon, 2010).

Descriptive statistics were used to present all data obtained from the pilot phase and main phase sample. The differences between frequencies among countries were determined using χ^2 tests. For cases in which the χ^2 test is not appropriate, *non-parametric tests* were used. For some analysis the p value was calculated using robust non-parametrical *Monte Carlo test* for independence of rows from columns (Monte Carlo test, 2010). All statistical analyses except the Monte Carlo test were carried out with the SPSS 13.0 (SSPS inc., Chicago, IL, USA) statistical software package.

4. Results of the research project

4.1. PICMIN instrument and the ICR results

A three-phase study to develop the PICMIN instrument based on the principles of content analysis was conducted and its ICR was tested. The PICMIN instrument consists of *eleven descriptive and five analytical categories* and is intended to allow comparison among countries and different studies over time. A short version of the PICMIN

instrument with the coding scheme but without the instructions for the coding is attached (Attachment 1). In all three phases of the study ICR values for descriptive categories indicated *high reliability* (APPA above 85%, Krippendorff's α above 0.75).

4.2. Print media representations of mental illness

4.2.1 Pilot phase results

The *most frequently* described psychiatric disorders among the articles analyzed were *substance abuse disorders*. In a large proportion of the articles no specific psychiatric disorder was mentioned (Croatia 24%, Slovakia 30.2% and Czech Republic 36.5%). The *opinion of a mental health professional* was sought in *one-third of the articles* and people with mental illness were quoted in about 10% of all articles. Mental health professionals were listed as a source of information in 61.6% of the positive articles, compared to only 16.3% of the negative articles.

Negative articles were almost equally distributed among all three countries: 37.4% of articles in the Czech Republic, 38.4% of articles in the Slovak Republic, and 40.0% articles in Croatia. In all three countries, a *neutral tone in headlines was predominant*. Positive tone represented the smallest group with 11% in all countries. A negative tone was found in approximately one-third of the headlines. The mean number of words per article across all three countries was 237. A *larger word count* was associated with more *positive* global impression.

People with mental illness were predominantly presented as dangerous, involved in crime-related stories such as committing homicide (Croatia 48.7%, Slovakia 30.2% and Czech Republic 27.0%), or physical assault (Croatia 30.8%, Slovakia 25.7% and Czech Republic 20.7%). Aggressive behavior of a mentally ill person (perpetrator, victim or both) was described in 60.5% of the negative articles, versus only 5% of the positive ones. Some of the main characteristics (distribution of the articles among different type of print media, articles positioned with headline on cover, and disorders mentioned) are presented in Table 2.

The positive and negative statements from the articles were grouped accordingly to their common features in order to form meaningful sub-groups and groups, reflecting overall conclusion or main emphasis of the article. *Four groups* were identified - *mental illness as a medical condition*, *mental illness and society*, *psychiatric services*, and *mental illness and aggression*.

4.2.2. Violence and mental disorders in the Czech and Slovak print media

In addition to the analysis for the pilot study sample, another detailed analysis on aggression and mental disorders in the print media was performed. Only articles from Czech and Slovak Republic were included, thus enabling more precise interpretation of

Table 2 Characteristics of the studied articles, pilot phase

Feature		Total sample N=450 N (%)	Croatia N=75 N (%)	Czech Rep. N=203 N (%)	Slovak Rep. N=172 N (%)	Test (among countries) Pearson Chi-Square <i>X</i> ² , <i>df</i> , <i>p</i> value
Media type	Tabloids	153 (34)	0 (0)	75 (37)	78 (45)	<i>X</i> ² =62,965, <i>df</i> =4, <i>p</i> <0.001
	Broadsheets	256 (57)	70 (93)	115 (57)	71 (41)	
	Magazines	41 (9)	5 (7)	13 (6)	23 (14)	
Headline on the cover	Yes	34 (8)	4 (5)	26 (13)	4 (2)	<i>X</i> ² =15,284, <i>df</i> =2, <i>p</i> =0.001
	No	416 (92)	71 (95)	177 (87)	168 (98)	
Disorder mentioned (chosen groups)	F0	16 (4)	0 (0)	6 (3)	10 (6)	<i>X</i> ² =51.718, <i>df</i> =10, <i>p</i> <0.001
	F1	118 (26)	32 (43)	53 (26)	33 (19)	
	F2	60 (13)	12 (16)	19 (9)	29 (17)	
	F3	84 (19)	15 (20)	25 (12)	44 (26)	
	F4	38 (8)	14 (19)	8 (4)	16 (9)	
Sensational content	Yes	160 (36)	36 (48)	57 (28)	67 (39)	<i>X</i> ² =10.888, <i>df</i> =2, <i>p</i> =0.004
	No	290 (64)	39 (52)	146 (72)	105 (61)	
Sensational form	Yes	139 (31)	55 (73)	50 (25)	34 (20)	<i>X</i> ² =76.983, <i>df</i> =2, <i>p</i> <0.001
	No	294 (69)	20 (27)	153 (75)	138 (80)	
Aggressive behavior	Perpetrator	115 (26)	31 (41)	32 (16)	52 (30)	<i>X</i> ² =5,303, <i>df</i> =6, <i>p</i> =0.258
	Victim	26 (6)	5 (7)	11 (5)	10 (6)	
	Both	15 (3)	1 (1)	7 (4)	7 (4)	
	None	294 (65)	38 (51)	153 (75)	103 (60)	
Aggressive act	Autoaggr.	31 (7)	3 (4)	15 (7)	13 (8)	<i>X</i> ² =30.688, <i>df</i> =6, <i>p</i> =0.006
	Hetero-aggr.	120 (27)	35 (47)	36 (18)	49 (28)	
	Both	25 (5)	1 (1)	12 (6)	12 (7)	
	None	274 (61)	36 (48)	140 (69)	98 (57)	
Length of the article	Mean number of words	237	200	239	250	Chi-Square=8,325, <i>df</i> =1, <i>p</i> =0.004*

*Kruskal Wallis Test; F0 stands for organic disorders, F1 for substance abuse disorders, F2 for psychotic disorders, F3 for affective disorders, F4 for neurotic disorders, and F50 for eating disorders

the data. **One third** of the analyzed **articles** (N=117, 31.2%) reported that **persons with mental disorders** were involved in some kind of **aggressive behavior**. A vast majority of these articles presented mentally ill individuals as **perpetrators** (N=84, 71.8% articles). In 19 articles (16.2%), they were presented as victims of aggressive behavior; in 14 articles (11.9 %) they were placed in the role of both victim and perpetrator at the same time. The rest of the analyzed articles (N=258, 68.8%), contained no information that a person with mental disorder was involved in aggressive activity.

Persons with **psychotic disorders** were most frequently presented **as perpetrators** (N=24, 50.0%), whereas persons with **organic disorders** were most often presented **as victims** of aggressive behavior (N=2, 12.5%). Eating disorders (N=30, 93.8%) and anxiety disorders (N=22, 91.7%) were most often presented without any mention of aggressive behavior (Table 3).

Table 3 Portrayals of persons with different psychiatric disorders according to their role in the aggressive behavior mentioned in the article, N (%)

Disorder mentioned	F0 N=16	F1 N=86	F2 N=48	F3 N=69	F4 N=24	F50 N=32	Other PD N=30	NRSPD N=127	Total N=375
Perpetrator	3 (18.8)	14 (16.3)	24 (50.0)	10 (14.5)	0 (0)	0 (0)	6 (20.0)	33 (26.0)	84 (22.4)
Victim	2 (12.5)	2 (2.3)	3 (6.3)	4 (5.8)	2 (8.3)	2 (6.3)	2 (6.7)	6 (4.7)	19 (5.1)
Both	3 (18.8)	5 (5.8)	6 (12.5)	3 (4.4)	0 (0)	0 (0)	2 (6.7)	3 (2.4)	14 (3.7)
No aggressive behavior	8 (50.0)	65 (75.6)	15 (31.3)	52 (75.4)	22 (91.7)	30 (93.8)	20 (66.7)	85 (66.9)	258 (68.8)

Monte Carlo test, p<.0001; F0 stands for organic disorders, F1 stands for substance abuse disorders, F2 stands for psychotic disorders, F3 stands for affective disorders, F4 stands for neurotic disorders, F50 stands for eating disorders, "Other PD" stands for personality disorders, including antisocial personality disorder; child and adolescent disorders, including conduct disorder; mental retardation and sexual disorders; and NRSPD stands for Not related to any specific psychiatric disorders.

From all articles self-directed aggression behavior was reported in 19 (5.1%) articles mentioning completed suicide, 27 (7.2%) with attempted suicide, and in 8 (2.1%) articles self-harm was addressed. **Completed suicide** most often appeared in articles dealing with **affective disorders** (N=9, 2.4%), whereas attempted suicide was mostly mentioned in "non related to any specific psychiatric disorder" articles (N=18, 4.8%). Homicide cases were mentioned in 51 articles (13.6%) and various forms of physical assault toward other people in 48 (12.8%) articles. Although homicide was associated mostly with psychotic (N=19, 5.1%) and affective disorders (N=13, 3.5%), cases of **physical assault** were mostly mentioned in articles dealing with subjects with **psychotic** (N=15, 4.0%), and **organic disorders** (N=4, 1.1%).

4.2.3. Main phase results

Print media representations of mental illness in Croatia, Czech Republic and Slovakia *significantly differed* in the type of *media distribution*, use of *sensationalistic writing*, *association of aggressive behavior* with persons with mental illness, and the distribution of the *global impression of the headline* (Table 3). The *full name* of the mentally ill person *was revealed in more than one third of all articles* in all countries. Stigmatising representations of mentally ill persons were found in 28.8% of articles in Czech Republic, 35.3% of articles in Croatia and 38.6% of articles in Slovakia.

5. Discussion

5.1. Discussion on the development of the PICMIN instrument

Although qualitative studies dealing with the stigma of mental illness in print media have mainly used content analysis or discourse analysis (Stout et al., 2004), there is no standardised measurement of the stigma of mental illness in print media, particularly for use in international studies, using clearly operationalised definitions. Our research team has *developed a standardised and objective measure of the stigma* of mental illness in print media - PICMIN instrument.

The instrument was developed using the principles of content analysis, mainly focusing on the quantitative interpretation of the analysis of media messages, however aspects of the qualitative content analysis were also included in the instrument as recommended by researchers (Macnamara, 2006; Patton, 2002;). This method of *simultaneously incorporating quantitative and qualitative content analysis* was used in the process of defining categories and scheme coding, allowing the use of the instrument in *assessing the tonal qualities* (global impression as named in this instrument) of the articles like sensationalism, positive and negative statements or quotes from the article or the contextual factors such as sources quoted. Hence, simultaneously incorporating qualitative and quantitative content analysis enabled multiple coding for the “disorder mentioned”, “source of information” and “type of aggressive act” categories. All other categories are exhaustive and mutually exclusive.

The establishment of ICR is essential in content analysis (Krippendorff, 2004; Neuendorf, 2002). After testing the initial version of the instrument, unsatisfactory ICR scores were found for categories such as “sensationalism content,” “sensationalism style,” “global impression of heading,” and “global impression of text” prompting the research team to improve a final version of the instrument with strictly defined criteria for the coding of these categories. Defined criteria for coding, along with joint education of

Table 3 Characteristics of the studied articles, main phase

Feature		Croatia N=238 N (%)	Czech Rep. N=226 N (%)	Slovak Rep. N=158 N (%)	Test (among countries) Pearson Chi-Square <i>X², df, p value</i>
Media type	Tabloids	21 (8.9)	59 (26.1)	79 (50.0)	<i>X²=140.43, df=4, p<0.001</i>
	Broadsheets	211 (88.1)	142 (62.8)	47 (29.8)	
	Magazines	7 (3.0)	25 (11.1)	32 (20.2)	
Headline on the cover	Yes	17 (7.1)	25 (11.1)	4 (2.5)	<i>X²=9.92, df=2, p=0.007</i>
	No	221 (92.9)	201 (88.9)	154 (97.5)	
Full name of the mentally ill revealed	Yes	92 (38.7)	80 (35.4)	66 (41.8)	<i>X²=1.62, df=2, p=0.444</i>
	No	146 (61.3)	146 (64.6)	92 (58.2)	
Crime story	Yes	88 (37.0)	80 (35.4)	41 (26.0)	<i>X²=5.69, df=2, p=0.006</i>
	No	150 (63.0)	146 (64.6)	117 (74.0)	
Sensational.	Yes - high	52 (21.8)	20 (8.8)	24 (15.2)	<i>X²=35.01, df=4, p<0.001</i>
	Yes - low	103 (43.3)	68 (30.1)	55 (34.8)	
	No	83 (34.9)	138 (61.1)	79 (50.0)	
Role in aggressive behavior	Perpetrator	85 (35.7)	63 (27.9)	35 (22.1)	<i>p=0.010*</i>
	Victim	14 (5.9)	10 (4.4)	8 (5.1)	
	Both	5 (2.1)	0 (0)	3 (1.9)	
	None	134 (56.3)	153 (67.7)	112 (70.9)	
Type of aggressive act	Autoaggr.	18 (7.6)	25(11.0)	11 (7.0)	<i>p=0.065*</i>
	Heteroaggr.	85 (35.9)	63 (27.8)	42 (26.6)	
	Both	3 (1.2)	8 (3.5)	1 (0.6)	
	None	132 (55.3)	131 (57.7)	104 (65.8)	
Global impression – headline	Destigmatising	12 (5.0)	10 (4.4)	11 (7.0)	<i>X²=16.71, df=4, p=0.002</i>
	Neutral	184 (77.3)	202 (89.4)	122 (77.2)	
	Stigmatizing	42 (17.7)	14 (6.2)	25 (15.8)	
Global impression – article	Destigmatising	54 (22.7)	70 (31.0)	39 (24.7)	<i>X²=9.11, df=6, p=0.168</i>
	Neutral	76 (31.9)	77 (34.0)	46 (29.1)	
	Mixed	24 (10.1)	14 (6.2)	12 (7.6)	
	Stigmatising	84 (35.3)	65 (28.8)	61 (38.6)	

*Fisher's exact test

coders, enabled higher ICR scores in the main phase and produced an acceptable level of reliability that many similar studies have lacked (Coverdale et al., 2002).

5.2. Discussion on the print media representations of mental illness

5.2.1. Discussion on the pilot phase results

Compared to similar studies, mostly conducted in English speaking countries - Australia (Francis et al., 2005), Canada (Stuart, 2003), New Zealand (Coverdale et al., 2002), USA (Corrigan et al., 2005), UK (Philo, 1996) and a few others - Serbia (Bilic & Georgaca, 2007), Italy (Carpiniello et al., 2007), Turkey (Boke et al., 2007), some new observations are worth mentioning. These include the length of the article and its impact on the global impression of the article, the relationship between the coding of the headline and the article itself, and the vast disconnection between the real prevalence of some disorders and their coverage in the print media.

The *most surprising result* in the pilot phase was the vast difference in the length of the articles when grouped in positive and negative clusters. **“Positive”** articles were more than 50% *longer than “negative”* ones. Correct expressions such as “a person with schizophrenia” are replaced with the label “schizophrenic” and facts on therapy and recovery are dispensable.

Interestingly, it appears that substance abuse disorders at least seem to be covered according to their real prevalence in the three countries (WHO, 2009). This is not the case, however, when comparing the correlation of actual rates of mental illness in the populations for other conditions (*schizophrenia and eating disorders over-represented, anxiety disorders, dementia*, on the other hand, *under-represented*).

In contrast to Croatia and the Slovak Republic, where the coverage of affective disorder was higher (20.0% and 25.6% respectively), in the Czech Republic only 12.3 % of the articles covered these conditions. These results *are in line with the analysis done* in the Czech Republic *in the 70's by Janík and Kubičková*, who also reported that affective disorders were mentioned less frequently (1975).

Disturbing finding is that only five articles out of 60 where psychosis was mentioned were coded as positive, with similar results across countries. *Psychosis* seems to be the *most stigmatized mental disorder*, a result also found in several similar studies (Francis et. al., 2004; Stuart, 2003). Combating the prejudice against this severe mental condition remains one of the biggest challenges for the anti-stigma campaigns in Central Europe also. On the other hand *eating disorders* achieved the best score from all mental disorders, being thus the *least stigmatized*.

A similar study conducted in Great Britain came to the conclusion that 46% of articles contained references to crime (Ward, 1997). These numbers are very close to findings from the pilot phase, although they vary among the countries studied. Notably,

the rates of articles dealing with *aggression* of people with mental illness is *much higher in Croatia* (49%), which might be related to the recent 1991-1995 war. When analyzing what kind of aggressive acts are most often connected with individuals with mental illness, based on results from the pilot phase it might be concluded that *hetero-aggressive acts* (homicide, physical assault, and aggression against objects) *outnumbered the auto-aggressive ones* (committed or attempted suicide, self-harm) almost two-fold in the Czech Republic, three-fold in Slovakia and nine-fold in Croatia (Nawková et al., 2012).

Although individuals with mental illness or their families appeared in some articles as sources of information, those articles tended to be negative rather than positive. This is *in contrast to other studies* which showed that presentation of mental illnesses in the form of self-portraits by the affected persons resulted in their positive image accentuating their ability to overcome stigma (Nairn & Coverdale, 2005).

Over one-third of articles had quotes or perspectives of mental health professionals which is significantly higher than the 15% reported by Wahl (2001). In contrast with the negative impact of presenting the patients as a source of information, an association between the presence of a mental health professional in the story and a positive global impression rating has been found. Where *general medicine has a “bad doctor” focus, psychiatry has a “bad patient” angle* (Byrne, 2000).

Qualitative analysis revealed what topics are dealt with articles related to mental illness. The first group consists of articles describing mental illness as a “medical condition”, including prevention, treatment, as well as its consequences. The biggest group consisted of articles in relation to “society”, in which dominated the issues of stigmatization and politics. “Psychiatric services” group was represented with leading themes; misuse of psychiatry and quality of mental health care. In many articles “aggression” connected with mental illness presented the fundamental motive and was therefore identified as a group.

5.2.2. Discussion on the topic of violence and mental disorders in the Czech and Slovak print media

Although *organic disorders* (mostly dementia) were mentioned in only 4% of the articles, the fact that *half of these cases* were mentioned in the context of some kind of *aggressive behavior* should not be overlooked. Negative stereotyping of organic disorders may pose a significant threat to society’s perception of old age, thus increasing the likelihood of organic disorders joining psychotic disorders on the top of the “most dangerous disorders”.

Not surprisingly, *schizophrenia* was *most frequently* mentioned in the context of *homicide* (40% of the articles). Epidemiological investigations are consistently showing that the proportions of persons with schizophrenia who commit crimes vary from one study to another, while the elevations in risk among those with schizophrenia when compared to the general population remains similar (Hodgins, 1998). Nonetheless, the coverage of „homicidal schizophrenics“ in the print media is way to disproportionate to the evidence when compared to the general population.

Both *suicides and suicide attempts* were *most frequently* reported in the context of *affective disorders*, which reflects the observation that out of all mental disorders, depression and bipolar disorder poses the highest risk for suicide (Hawton et al., 2003; Sarchiapone et al., 2009). Furthermore, a significant proportion of articles reported on subjects with affective disorders who committed homicide. This finding contradicts a study by Rowe and colleagues indicating that depression was rarely associated with violence and the focus was generally on self-harm (Rowe et al., 2003).

Of *particular interest* is the fact that among *32 articles* that mentioned *eating disorders, none reported on self harm* even though the lifetime rate of self-injurious behavior occurrence in person with eating disorders is as high as 34% (Paul et al., 2002).

Substance abuse and antisocial personality disorders are commonly reported as comorbidities which are significantly contributing to the increase incidence of violence in people with severe mental illness (Elbogen & Johnson, 2009). Even though the *substance abuse disorders* received the widest coverage among the main diagnostic clusters, interestingly in terms of revealing the patient as a perpetrator it *did not* by far *reach the high prevalence of psychotic disorders* (16% vs. 50%), in contrary, the vast majority of such articles (76%) did not mention violent crime at all.

Conduct disorder and *antisocial personality disorder* were not treated as separate diagnosis because of extremely low frequency of endorsement. This is a notable finding, as the evidence is showing that the individuals with antisocial personality disorder have very often criminal history (De Brito & Hodgins, 2009), e.g. prisoners are about ten times more likely to have antisocial personality disorder, than the general population (Fazel & Danesh, 2002). When analyzing the whole cluster of “other psychiatric disorders” that included these conditions, *distinct link with violence commitments has been traced*. This is however mirrored in the print media less dramatically than one would anticipate based on the evidence (Nawka et al., 2012).

A vast majority of articles presented mentally ill people as perpetrators. Corrigan et al. (2005) found that only 4% of the articles portrayed mentally ill people as *victims*,

which is very close to our finding of 5%. A high perpetrator/victim ratio may falsely suggest that mentally ill individuals are more likely to be the aggressive initiators of violence rather than victims of aggressive behavior, even though victimization is more common than aggressive behavior among these individuals (Hodgins et al., 2008). Similar studies in other countries reported that stories related to aggressive behavior often ended up in the front sections of newspaper, making them more visible to readers (Francis et al., 2004; Corrigan et al., 2005), but this was not the case in our sample, as those articles were almost equally distributed on the cover as in the later sections.

Mental disorders in general do increase the risk of homicidal violence by two-fold in men and six-fold in women (Richard Devontoy et al., 2009), but our findings reveal disproportionate depictions of violence and aggression in all main psychiatric diagnostic clusters except for neurotic and eating disorders. *The dominance of dangerousness and criminality depictions in the media of mental illness is thus significantly overstated.*

5.2.3. Discussion on the main phase results

The *distribution of the articles depending on the media type significantly differs* in studied countries. Results of the main phase sample show that in Croatia only 3% of the articles were published in weekly periodicals (magazines) and a small proportion of the articles was found in the tabloids (8.9%). Contrary to the Czech Republic and Slovakia where three of the six most read daily newspapers are defined as tabloids, in Croatia among the six most read daily newspapers only one daily newspaper (“24 sata”) is defined as a tabloid. The PICMIN instrument establishes the article’s prominence, with concern to the article’s headline on the cover of the media. Unfortunately, *also results from the main phase* confirm a *strong connection between mental illness and violence.*

The instrument also aids in the determination of full name disclosure of the mentally ill. To our knowledge, none of the previous studies examined this. *Strikingly, the full name of the mentally ill person was revealed in more than one-third* of all articles in all countries. This finding is a clear call for action for mental health advocates to challenge negative media portrayals of the mentally ill and insist on ethical and responsible journalism in all countries.

The proportion of the stigmatising representations of mentally ill persons that was found in our research study (in 28.8% articles in Czech Republic, 35.3% articles in Croatia and 38.6% articles in Slovakia) is similar to the findings of Wahl’s analysis of newspaper coverage in the USA (2002).

A comparison of the results from the pilot and main phases shows that *de-stigmatising representations of the mentally ill have increased* in the Czech Republic from 23.2% to 31% and almost three-fold in Croatia (from 8% to 22.7%). Since Croatia has a history of joint education of health professionals and health journalists through the annual “Media and Health” course (Rukavina et al., 2007), members of the Croatian part of a research team conducted an anti-stigma workshop at the “*Media and health*” course in 2009 with the aim to present the results of the pilot phase and clarify recommendations on responsible reporting about mental illnesses. Recently, in the Czech Republic and in Slovakia, *specialised press conferences* for health journalists covering issues of mental health have been introduced.

5.2.4. Limitations of the research study

There are several limitations of this study. In contrast to the Czech and Slovak web-based search engines using only keywords, the Croatian agency used real people who excluded articles that did not have a mental illness as the relevant content of the article. Some of the relevant articles could have been overlooked due to this different approach. Second, the ICR results from testing the corrected version of the instrument were reliable for all analytical categories besides the “global impression of the headline” category, so additional coder training was organised to improve ICR scores in that category. Third, time sampling of the pilot phase (based on weeks as the defined time period) may caused over-presentation of some stories. Lastly, the PICMIN instrument is intended for use only with print media, and as in almost all other studies in this field, only written materials are analysed, so important visual information are omitted from the coding process.

5.3. Joint actions of mental health professionals and journalists

More activities such as anti-stigma efforts and proactive lobbying are needed in order to reshape the negative stereotypes and attenuate the stigmatising potential surrounding mental illnesses. *Journalists* should be *continuously informed* about mental illness and sensitised to the effects that negative media portrayal may have on stigma and on consumers’ experience of stigma. In order to *promote responsible journalism principles*, national mental health advocates and media associations should develop deontological protocols on news reporting concerning mental illness.

In Czech Republic we have already initiated activities that should tighten the mental health professionals together with media professionals (journalists, editors, etc.). *Interviews* have been given to the newspapers and journalists have been approached via

press conferences and the issue of the poor coverage of psychiatric themes has been discussed. Moreover a *prize for the best article on the issue of mental health/illness* in the print media has been introduced as a direct effect of this research project. This prize has been awarded by the Czech Psychiatric Association ČLS JEP since 2010. The quality of the applications is being measured by the PICMIN instrument.

Some encouraging changes following these interventions might be traced, as journalists have been in closer contact with mental health professionals. These new activities, however, are just the initial steps in what must be a longer-term effort at *improving mutual collaboration* (Nawková et al, 2010).

6. Conclusion and outcomes of the research study

Many studies have shown that the portrayal of the mentally ill people is frequently negative and contributes to their stigmatization (Coverdale et al., 2002; Huang & Priebe, 2003). Such a stigmatising depiction has a negative impact on these people's lives; public's attitudes to them; and also on decision-making in social policy and in the legislature (Cutcliffe & Hannigan, 2001). These attitudes are then widely spread among the public, where they persist, become a part of the culture (Allen & Nairn, 1997), and ultimately result in discrimination against people with psychiatric disorders (Corrigan, 2004). On the other hand, media can play an important role in reducing this stigmatisation by providing adequate information about this topic and engaging in antistigma campaigns (Holcnerová et al., 2010).

Although qualitative studies dealing with the stigma of mental illness in print media have mainly used content analysis or discourse analysis (Stout et al., 2004), there was no standardised measurement of the stigma of mental illness in print media, particularly for use in international studies using clearly operationalized definitions.

The instrument which we have developed, *Picture of Mental Illness in newspapers (PICMIN)*, consists of eleven descriptive and five analytical categories. The major strength of this research study is that the PICMIN instrument allows comparison among countries and different studies over time. According to the literature search, only one study has comparatively analysed articles from several countries (Huang & Priebe, 2003), but this research study focused on a broader context of mental health care and had used articles from only anglophonic countries. There is hope that the application of the *PICMIN instrument* in various socio-cultural settings *will provide* researchers with more detailed country *specific insight* about the representations *of mental illnesses in the print media*.

Moreover the research team *conducted a comparative study* on the depiction of mental health/illness issues in the print media, which was done *in three countries* with different languages. The media representations of mental illness show a few common features across the countries that we studied. We report a *similarly high level of stigmatizing articles*, clearly exceeding the ones with destigmatizing statements. *Tabloids clearly dominated in stigmatizing category*, representing the strongest source out of the different types of print media. *Longer articles tend to have much lesser stigmatizing potential* and some mental disorders are *over-represented* when comparing the correlation of their actual rate in the populations (*schizophrenia and eating disorders*) and some (*anxiety disorders and dementia*) are on the other hand, *under-represented*. As for the source of information in the articles, the *greatest predictor of positive outcome* is *a reference from a scientific survey* and from a mental health professional.

The proportion of articles depicting mental disorders together with either *self- or other-directed aggressive behavior* is as high as *one-third of all articles*. Homicide was most frequently mentioned in the context of psychotic disorders, while affective disorders were most frequently associated with both completed suicides and homicides. The *vast majority of articles* with violent content presented *mentally ill people as perpetrators*, and these articles were more often coded as stigmatizing.

In some of the studied categories we have found significant differences among countries, like the type of media distribution; whether headline of the article was positioned on the media cover; in the use of a sensationalistic style of writing; in the association of aggressive behavior with persons with mental illness; and in the distribution of the global impression of the headline. As shown, *coverage of mental health/illness issues differs to large extent across countries, but is generally of poor quality*.

Based on such findings, practical recommendations for journalists can be tailored specifically for each country (*workshops for journalists and mental health professionals, prizes for journalists, educational activities at the schools of journalism, destigmatization campaigns* – especially the ones focused on raising awareness of mental health and literacy of wide public, etc.) The ultimate goal of this research effort is to improve media coverage of mental health/illness issues, minimize potential discriminatory practices, and increase help-seeking behavior.

7. References

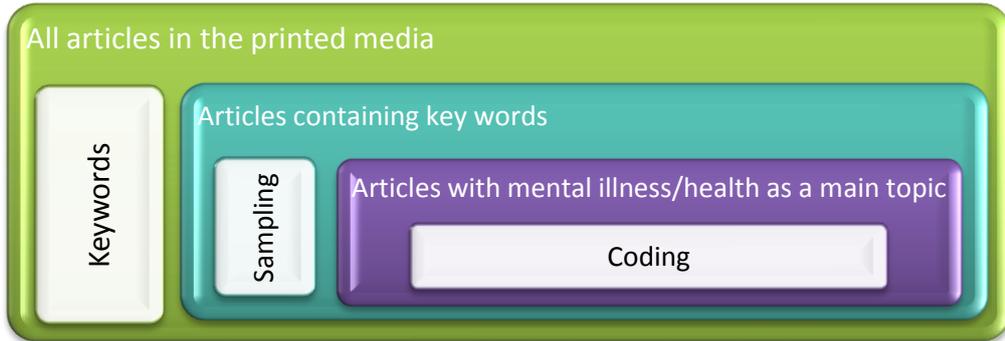
1. Allen, R., & Nairn, R.G. (1997). Media depictions of mental illness: An analysis of the use of dangerousness. *Australian and New Zealand Journal of Psychiatry*, **31**, 375-381.
2. Anderson, M. (2003). One flew over the psychiatric unit: Mental illness and the media. *Journal of Psychiatric and Mental Health Nursing*, **10**, 297-306.
3. Angermeyer, M. C., & Matschinger, H. (1996). The effect of violent attacks by schizophrenic persons on the attitude of the public toward the mentally ill. *Social Science and Medicine*, **43**, 1721-1728.
4. Arbanas, G. (2008). Adolescents' attitudes toward schizophrenia, depression and PTSD. *Journal of Psychosocial Nursing and Mental Health Services*, **46**, 45-51.
5. Arboleda-Flórez, J., Holley, H. L., & Crisanti, A. (1996). Mental illness and violence: Proof or stereotype? Ottawa, Health Promotion and Programs Branch, Health Canada.
6. Bilic, B., & Georgaca, E. (2007). Representations of "mental illness" in Serbian newspapers: A critical discourse analysis. *Qualitative Research in Psychology*, **4**, 167-186.
7. Boke, O., Aker, S., Aker, A.A., Sarisoy, G., & Sahin, A.R. (2007). Schizophrenia in Turkish newspapers. *Social Psychiatry and Psychiatric Epidemiology*, **42**, 457-461.
8. Byrne, P. (2000). Stigma of mental illness and ways of diminishing it. *Advances in Psychiatric Treatment*, **6**, 65-72.
9. Carpiniello, B., Girau R., & Orru M.G. (2007). Mass-media, violence and mental illness. Evidence from some Italian newspapers. *Epidemiologia e Psichiatria Sociale*, **16**, 251-255.
10. Corrigan, P. (2004). How stigma interferes with mental health care. *American Psychologist*, **59**, 614-625.
11. Corrigan, P.W., Watson, A.C., Gracia, G., Slopen, N., Rasinski, K., & Hall, L.L. (2005). Newspaper stories as a measure of structural stigma. *Psychiatric Services*, **56**, 551-556.
12. Coverdale, J., Nairn, R., & Claasen, D. (2002). Depictions of mental illness in print media: A prospective national sample. *Australian and New Zealand Journal of Psychiatry*, **36**, 697-700.
13. Cutcliffe, J. R., & Hannigan, B. (2001). Mass media, "monsters" and mental health clients: The need for increased lobbying. *Journal of Psychiatric and Mental Health Nursing*, **8**, 315-321.
14. De Brito, S.A., & Hodgins, S. (2009). Antisocial personality disorder. In Personality, personality disorder and violence. McMurrin, M., & Howard, R.C. (Eds). Chichester, Wiley, 133-153.
15. Dietrich, S., Heider, D., Matschinger, H., & Angermeyer, M.C. (2006). Influence on newspaper reporting on adolescents' attitudes toward people with mental illness. *Social Psychiatry and Psychiatric Epidemiology*, **41**, 318-322.
16. Dragomirecka, E., Brazinova A., Palova E., Baudis P., & Selepova, P. (2008). The history of mental health care in Czechoslovakia. In Scheffler, R. & Potucek, M. (Eds.), Mental health care reform in the Czech and Slovak Republics, 1989 to the present. Praha, Karolinum Press, 29.
17. Elbogen, E., & Johnson, S.C. (2009). The intricate link between violence and mental disorder: Results from the national epidemiologic survey on alcohol and related conditions. *Archives of General Psychiatry*, **66**, 52-161.
18. Fazel, S., & Danesh, J. (2002). Serious mental disorder in 23000 prisoners: A systematic review of 62 surveys. *Lancet*, **359**, 545-550.

19. Francis, C., Pirkis, J., Blood, R.W., Dunt, D., Burgess, P., Morley, B., Stewart, A., & Putnis, P. (2004). The portrayal of mental health and illness in Australian non-fiction media. *Australian and New Zealand Journal of Psychiatry*, **38**, 541-546.
20. Francis, C., Pirkis, J., Blood, R.W., Dunt, D., Burgess, P., Morley, B., & Stewart, A. (2005). Portrayal of depression and other mental illnesses in Australian nonfiction media. *Journal of Community Psychology*, **33**, 283-297.
21. Francis, C., Pirkis, J., Dunt, D., & Blood, R. W. (2001). Mental health and illness in the media: A review of the literature. Canberra, Australian Government Department of Health and Aged Care.
22. Freelon, D. (2010). ReCal: Intercoder reliability calculation as a web service. *International Journal of Internet Science*, **5**, 20-33.
23. Grohmannová, K. (2006). Stimulants and opioids as seen through the media. (article in Czech) *Adiktologie*, **6**, 242-257.
24. Hawton, K., Houston, K., Haw, C., Townsend, E., & Harriss, L. (2003). Comorbidity of axis I and axis II disorders in patients who attempted suicide. *American Journal of Psychiatry*, **160**, 1494-1500.
25. Hayes, A.F., & Krippendorff, K. (2007). Answering the call for a standard reliability measure for coding data. *Communication Methods and Measures*, **1**, 77-89.
26. Hazelton, M. (1997). Reporting mental health: A discourse analysis of mental health-related news in two Australian newspapers. *Australian and New Zealand Journal of Mental Health Nursing*, **6**, 73-89.
27. Health development action for south-eastern Europe (SEE) – Mental health project. (2009). http://www.euro.who.int/stabilitypact/projects/20040611_3 Retrieved from the Web September 12, 2009.
28. Hodgins, S. (1998). Epidemiological investigations of the associations between major mental disorders and crime: Methodological limitations and validity of the conclusions. *Social Psychiatry and Psychiatric Epidemiology*, **33**, 29-37.
29. Hodgins, S., Cree, A., Alderton, J., & Mak, T. (2008). From conduct disorder to severe mental illness: Associations with aggressive behaviour, crime and victimization. *Psychological Medicine*, **38**, 975-87.
30. Holcnerová, P., Adámková, T., Nawková, L., Nawka, A., Miovský, M. (2010). The picture of mental illness in the printed media. (article in Czech) *Psychiatrie*, **14**, 85-90.
31. Huang, B., & Priebe, S. (2003). Media coverage of mental health care in the UK, USA and Australia. *Psychiatric Bulletin*, **27**, 331-333.
32. ICD-10 Classification of mental and behavioural disorders. (1993). WHO, Geneva.
33. Janík, A., Kubíčková, N. (1975). The picture of mentally ill in our newspapers. (article in Czech) *Česká a slovenská psychiatrie*, **71**, 92-100.
34. Jiráček, J., & Köpplová, B. (2003). Media and the society. (monography in Czech) Praha, Portál.
35. Kerlinger, F.N. (1972). The fundamentals of behaviour research. (monography in Czech) Praha, Academia.
36. Komar, Z., & Vukusic, H. (1999). Post-traumatic stress disorder in Croatian war veterans: Prevalence and psycho-social characteristics. In Dekaris, D., & Sabioncello, A. (Eds.). *New insights in post-traumatic stress disorder (PTSD)*. Zagreb, Croatian Academy of Science and Arts, 42-44.
37. Krippendorff, K. (2004). *Content analysis: An introduction to its methodology*. Thousand Oaks, CA, Sage Publications.
38. Macnamara, J. (2006). Media content analysis research paper: Uses, benefits and best practice methodology.

- <http://www.carmaapac.com/downloads/Media%20Content%20Analysis%20Research%20Paper.pdf> Retrieved from the Web December 27, 2010.
39. Marada, R. (2002). Mass media and changes in the civil politics. *Revue for the media*. http://fss.muni.cz/rpm/Revue/Revue03/marada_masova-media.pdf Retrieved from the Web November 13, 2008.
 40. Meagher, D., Newman, A., Fee, M., & Casey, P. (1995). The coverage of psychiatry in the Irish print media. *Psychiatric Bulletin*, **19**, 642-644.
 41. Miovská, L., Bráňová, H., & Miovský, M. (2008). Content analysis of media messages about illicit drugs in the Czech Republic. (article in Czech) *Alkoholizmus a drogové závislosti*, **43**, 193-204.
 42. Monte Carlo test. <http://www.toad.net/~jkaplan2/Mcirc.htm> Retrieved from the Web September 19, 2010.
 43. Motlová, L., Bárová, M., Bražínová, A., Dzúrová, D., & Vránová, J. (2008). Advocacy, stigma, and self-help. In Scheffler, R., Potůček, M. (Eds.). *Mental health care reform in the Czech and Slovak Republics, 1989 to the present*. Prague, Karolinum press, 187-195.
 44. Nairn, R., Coverdale, J., & Claasen, D. (2001). From source material to news history in New Zealand print media: A prospective study of the stigmatizing process in depicting mental illness. *Australian and New Zealand Journal of Psychiatry*, **35**, 654-659.
 45. Nawka, A., Rukavina, T.V., Nawková, L., Jovanovic, N., Brborovic, O., & Raboch, J. (2012). Psychiatric disorders and aggression in the printed media: Is there a link? A central European perspective. *BMC Psychiatry*, **12**, 19.
 46. Nawka, P. (2005). Slovakia. In Sartorius, N. & Schultze, H. (Eds.). *Reducing the stigma of mental illness. A report from a Global Program of the World Psychiatric Association*. Cambridge, Cambridge University Press, 108.
 47. Nawková, L., Nawka, A., Adámková, T., Rukavina, T.V., Holcnerová, P., Rojnic Kuzman, M., Jovanovic, N., Brborovic, O., Bednárová, B., Žuchová, S., Miovský, M., & Raboch, J. (2012). The picture of mental health/illness in the printed media in three central European countries. *Journal of Health Communication*, **17**, 22-40.
 48. Nawková, L., Adámková, T., Holcnerová, P., Nawka, A., Bednárová, B., Žuchová, S., Rukavina, T.V., Miovský, M., & Raboch, J. (2010). The depiction of people with mental illness in the Czech, Croatian and Slovak print media. (article in Czech) *Česká a Slovenská Psychiatrie*, **106**, 577-583.
 49. Neuendorf, K. (2002). *The content analysis guidebook*. Thousand Oaks, CA, Sage Publications.
 50. Newbold, C., Boyd-Barrett, O., & Van Den Bulck, H. (2002). *The media book*. Newbury Park, Sage Publications.
 51. Nunnally, J. (1961). *Popular conceptions of mental health: their development and change*. New York, Holt, Rinehart and Winston.
 52. Olstead, R. (2002). Contesting the text: Canadian media depictions of the conflation of mental illness and criminality. *Sociology of Health & Illness*, **24**, 621-643.
 53. Patton, M. (2002). *Qualitative evaluation and research methods*. Newbury Park, Sage Publications.
 54. Paul, T., Schroeter, K., Dahme, B., & Nutzinger, D.O. (2002). Self-Injurious behavior in women with eating disorders. *American Journal of Psychiatry*, **159**, 408-411.
 55. Pěč, O. (2012). Destigmatization. (web content in Czech) http://www.psychiatrie.cz/index.php?option=com_content&view=article&id=199&Itemid=108 Retrieved from the Web February 20, 2012.

56. Philo, G. (1996). The media and public belief. In Philo, G. (Ed.). *Media and mental distress*. Essex, Addison Wesley Longman.
57. Richard-Devantoy, S., Olie, J.P., & Gourevitch, R. (2009). Risk of homicide and major mental disorders: A critical review. *Encephale*, **35**, 521-530.
58. Rowe, R., Tilbury, F., Rapley, M., & O'Ferrall, I. (2003). About a year before the breakdown I was having symptoms': Sadness, pathology and the Australian newspaper media. *Sociology of Health & Illness*, **25**, 680-696.
59. Rukavina, T.V., Brborovic, O., & Harapin, M. (2007). Media and Health. In Donev, D., Pavlekovic, G., Zaletel Kragelj, L. (Eds.). *Health promotion and disease prevention*. Hellweg, Hans Jacobs Publishing Company, 256-267.
60. Rukavina, T.V., Nawka, A., Brborovic, O., Jovanovic, N., Kuzman, M.R., Nawková, L., Bednárová, B., Žuchová, S., Hrodková, M., Lattová, Z. (in press). Development of the PICMIN (picture of mental illness in newspapers): Instrument to assess mental illness stigma in print media. *Social Psychiatry and Psychiatric Epidemiology*.
61. Samaritans. (2008). Media guidelines: Portrayals of suicide. Samaritans. http://www.samaritans.org/know/media_guide.shtm Retrieved from the Web December 16, 2008.
62. Sarchiapone, M., Jovanovic, N., Roy, A., Podlesek, A., Carli, A., Amore, M., Mancini, M., & Marušić, A. (2009). Relations of psychological characteristics to suicide behaviour: Results from a large sample of male prisoners. *Personality and Individual Differences*, **47**, 250-255.
63. Sartorius, N. (2005). Developing the programme. In Sartorius, N. & Schultze, H. (Eds.). *Reducing the stigma of mental illness. A report from a Global Program of the World Psychiatric Association*. Cambridge, Cambridge University Press, 7-12.
64. Slopen, N.B., Watson, A.C., Gracia, G., & Corrigan, P.W. (2007). Age analysis of newspaper coverage of mental illness. *Journal of Health Communication*, **12**, 3-15.
65. Stout, P.A., Villegas, J., & Jennings, N.A. (2004). Images of mental illness in the media: Identifying gaps in the research. *Schizophrenia Bulletin*, **30**, 543-561.
66. Stuart, H. (2003). Stigma and the daily news: Evaluation of a newspaper intervention. *Canadian Journal of Psychiatry*, **48**, 651-656.
67. Vevera, J., Hubbard, A., Vesely, A., & Papezova, H. (2005). Violent behavior in schizophrenia. Retrospective study of four independent samples from Prague 1949 to 2000. *British Journal of Psychiatry*, **187**, 426-30.
68. Wahl, O.F. (2000). Obsessive compulsive disorder in popular magazines. *Community Mental Health Journal*, **36**, 307-312.
69. Wahl, O.F. (2001). Commentary. *Current Opinion in Psychiatry*, **14**, 530-531.
70. Wahl, O.F., Wood, A., & Richards, R. (2002). Newspaper coverage of mental illness: Is it changing? *Psychiatric Rehabilitation Skills*, **1**, 9-31.
71. Ward, G. (1997). *Making headlines. Mental health and the national press*. London, Health Education Authority.
72. World Health Organization (WHO). (2009). Alcohol consumption and harm. <http://data.euro.who.int/alcohol/Default.aspx?TabID=4936> Retrieved from the Web September 3, 2009.

PICMIN



Phase 1

Keywords

Neutral terms	Labelling terms	Pejorative terms
psychiatr*, psychiatric facility, mental illness, hallucination, psychotherap*, psycholog*, dementia, schizophreni*, psychosis, depression, depressed, antidepressant, maniodepressive, mania, anxiety disorder, anorexia, bulimia, retardation, posttraumatic	schizophrenic, neurotic, psychotic, alcoholic, narcomaniac, anorectic, bulimic, psychopath (used as nouns not as adjectives)	madman, madhouse, lunatic, maniac, junkie, psychopath

Phase 2

Sampling

Selection of articles in which the subject of mental health/illness represents the main content.

Phase 3

Coding

Descriptive categories	Analytical categories
Name of the article, Name of the media, Type of the media, Date of issue, Page, Section, Length (words), Personal data included, Crime story, Disorder mentioned	Sensationalism, Type of aggressive act, Role in aggressive behavior, Information on source, Quotes/statements, Global impression - heading, Global impression - article

Descriptive categories	
Name of the article	
Name of the media	
Date of issue	
Type of the media	Daily – broadsheet
	Daily – tabloid
	Weekly (magazine)
Key words identified	Neutral
	Labelling
	Pejorative
Section	News (politics, economic, sports, crime, etc.)
	Healthcare and science
	Entertainment and celebrities
	Not related to specific section
Disorder mentioned ^a	Organic disorders F00 – F09.9
	Substance abuse disorders F10.0 – F19.9
	Psychotic disorders F20.0 – F29.9
	Affective disorders F30.0 – F39.9
	Anxiety disorders F40.0 – F49.9
	Eating disorders F50
	Personality disorders F60.0 – F62.9
	Sexual disorders F52, F64.0 – F66.9
	Child and adolescent psychiatric disorder F80.0 – F98.9
	Other
Not related to specific mental disorder	
Source of information ^a	Mental health professional
	Scientific survey/public inquiry
	Famous person/celebrity
	Mentally ill person
	Family member of mentally ill
	Friends/colleagues/neighbours of mentally ill
	Police/judge/attorney
	Politician/local authorities

Is it a crime story?	Yes
	No
Personal data revealed ^b	Yes
	No
Page number	
Length (words)	

^a Multiple coding possible, ^b Article contains personal data of individual with mental illness which enables clear identification of such individual (e.g. full name, address, exact position in work or school, etc.). Do not code “Yes” if such individual is a famous person/celebrity/politician etc.

Analytical categories

Sensationalism	Yes – high
	Yes – low
	No
Type of aggressive act ^a	Completed suicide (method)
	Attempted suicide (method)
	Self-harm
	Homicide
	Physical aggression against other persons
	Aggression against objects
	Threatening behavior including verbal aggression
	No aggressive act
Role in aggressive behavior	Perpetrator
	Victim
	Both
	None
Quotes/statements ^a	Stigmatizing and destigmatizing quotes/statements justifying the coding of global impression
Global impression – headline	Destigmatizing
	Neutral
	Stigmatizing
Global impression – article	Destigmatizing
	Neutral
	Mixed
	Stigmatizing

^a Multiple coding possible

List of publications

1. publications related to the dissertation thesis

a) with IF

Nawková, L., Nawka, A., Adámková, T., Rukavina, T.V., Holcnerová, P., Kuzman, M.R., Jovanovic, N., Brborovic, O., Bednárová, B., Žuchová, S., Miovský, M., Raboch, J. (2012). The picture of mental health/illness in the printed media in three central European countries. *J of Health Commun*, **17**, 22-40. (IF=1.500)

Rukavina, T.V., Nawka, A., Brborović, O., Jovanović, N., Kuzman, M.R., Nawková, L., Bednárová, B., Žuchová, S., Hrodková, M., Lattová, Z. (in press). Development of the PICMIN (Picture of mental illness in newspapers): Instrument to assess mental illness stigma in print media. *Soc Psychiatry Psychiatr Epidemiol*. (IF=2.050)

Nawka, A., Rukavina, T.V., Nawková, L., Brborović, O., Jovanović, N., Raboch, J. (in press). Psychiatric disorders and aggression in the printed media: Is there a link? A central European perspective. *BMC Psychiat*, **12**, 19. (IF=2.890)

b) without IF

Holcnerová, P., Adámková, T., Nawková, L., Nawka, A., Miovský, M. (2010). Obraz duševních poruch v tištěných médiích. [The picture of mental illness in the print media]. *Psychiatrie*, **14**, 85-90.

Nawková, L., Adámková, T., Holcnerová, P., Nawka, A., Bednárová, B., Žuchová, S., Rukavina, T.V., Miovský, M., Raboch, J. (2010). Vyobrazení osob s duševním onemocněním v českých, chorvatských a slovenských tištěných médiích. [Depiction of people with mental illness in the Czech, Croatian and Slovak print media]. *Čes a slov Psychiat*, **106**, 577-583.

Nawková, L. (2009). Slovo úvodem: Média a psychiatrie. [Editorial: Media and psychiatry]. *Psychiat pro praxi*, **10**, 2.

Nawková L. (2010). Slovo úvodem: Obraz psychiatrie v médiích. [Editorial: The picture of psychiatry in the media]. *Psychiat pro praxi*, **11**, 2.

2. publications not related to the dissertation thesis

a) with IF

b) without IF

Kuklová, L., Nawka, A., & Raboch, J. (2006). Nemocná duše – nemocný mozek: Klinická zkušenost a fakta. [Sick soul – sick brain: Clinical practice and facts]. *Česká a slovenská psychiatrie*, **102**, 331–332.

Nawka, A., Raszka, M., Pacherová, L., Lattová, Z., Kmoch, V., Nawková, L., Sós, P., Bednárová, B., & Novák, T. (2012). Report from the congress: Future of psychiatry and psychiatric training – 19th European federation of psychiatric trainees forum in Prague. *Prague Medical Report*, **113**, :66-71.