

A Journey of Gender in Health

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A Note on Terminology

We have been mindful of the language in this booklet as the language of sex and gender can be very confusing and often used interchangeably. We have used the terms boy(s), man, men, girl(s), woman, and women to signify gender. Male and female are the language of sex. We also acknowledge that these may be contested terms in some communities and recognize the impact of language.

Acknowledgements

We would like to acknowledge all of our family, friends, supervisors, mentors, institutions, and funding bodies that have guided and encouraged us on our journeys.



Utrecht University

Radboud University



Radboudumc
university medical center



The comic book aims to illustrate how sex and gender can influence the health of people and to create knowledge, enthusiasm, and discussions among health professionals and researchers. We hope that our comics will create awareness and help you consider how sex and gender can influence health research and the health of communities and individuals.

This project is an international collaboration among health experts from The Netherlands, United Kingdom, and Canada. The authors received funding from ZonMw: The Netherlands Organisation for Health Research and Development as part of the Gender and Health Knowledge Program.

We are taking you on a journey across the life course, from childhood to older adulthood, to raise awareness of gender in health care. We follow the story of **H**, a person who represents the common **H**umanity we all share. H is not limited by the binary 'he' or 'she' and does not identify with a particular gender. We use the gender neutral 'they' in telling the story of H in the hope to prevent gendered stereotypes. The story follows H throughout their life path, using illustrations with summaries of the relevant literature to explore how gender can shape their health, health experiences, and health care.

The illustrations within these pages are all made by different artists. Each artist interprets H differently but they are identifiable by the letter H on their shirt. In this way, we emphasize that sex and gender affect us all. We attempt to show how many of us think of ourselves as one coherent being, but others often see us differently and may have gender assumptions about us.

We hope you enjoy the story of H.

Alina, Ilona, Phillip, Samantha, Sarah, and Tessa



SEX AND GENDER



Hiya! I'm H and you are going to follow me during my health journey



But Pal's explore the basics first!

Human organs are influenced by the sexed genome and the sex-hormones. Therefore assuming organs act alike is a highly biased assumption.



The genome does not only influence how genitals look ...



... but also the incidence and symptoms of diseases, for example in immune response.



We all have the same hormones, but in different levels.



In the animal kingdom multiple species are known that have multiple sexes or change their sex.



GENDER

Gender is a socio-cultural category, meaning there are different expressions of gender all over the world. Many cultures have the idea that there are only two genders, and this idea about gender becomes woven into the daily lives of people in many ways.



Gender identity is the personal sense of one's own gender. It can correlate with the assigned sex at birth or can differ from it.



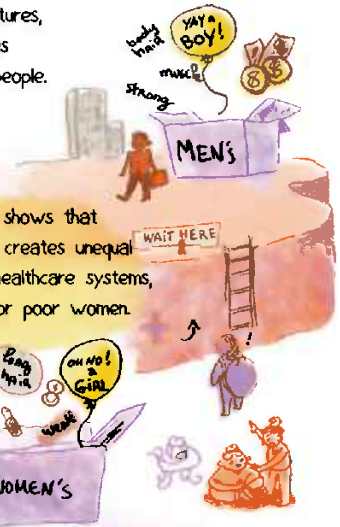
Gender expression is the way people embody cultural norms of gender. It may include clothing, language, meal choices, and other behaviors.



Throughout history and across many cultures, gender shapes social structures and creates power relations that often segregate people.



Research shows that gender often creates unequal access to the healthcare systems, particularly for poor women.



Gender is a performance and highly dependent on context, because the gender roles are influenced by culture and tradition.



Depending on the moment in time gender roles have changed, for example up until the 18th century it was quite fashionable for men to express emotions and cry in public.




There are many cultures on our planet that have more than two genders and even facebook offers more than twenty choices.

Gender Typing

Gender typing is the process by which children acquire values, motives, and behaviours viewed as appropriate for boys and girls. This is largely derived from gender stereotypes and norms. Gender norms are complex and can intersect with other social factors to impact health over the life course. Early gender-normative influences by parents and peers can have multiple and different health consequences for all children. For example, non-conformity with, and transgression of, gender norms can be harmful to health, particularly when they trigger negative sanctions. In summary, the impact of gender norms on health is context-specific, demanding care when designing effective gender-transformative health policies and programmes (Gupta et al., 2019; Hay et al., 2019; Heise et al., 2019; Heymann et al., 2019; Weber et al., 2019).





You can't play
in the kitchen.
Normal boys
like to play
outside

Get over here!
You're a boy! And
boys are better
at sports than
girls!

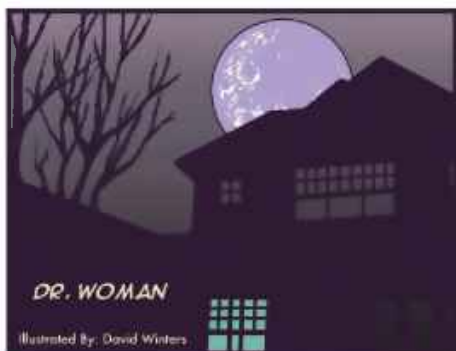
Everyone can play
with whatever they like!
Whether you want to play in
the kitchen, outside in football,
both or anything else!
It's up to you!

Gender and Health Care Professionals

Traditionally, medical professionals like surgeons, psychiatrists, and general practitioners are seen as men. Although men-women ratios in medicine are changing, a physician is still often represented by a man wearing a white coat and stethoscope. When interacting with patients, health care professionals (men and women) often refer to colleague physicians using the pronoun 'he'. Sometimes, the pronoun 'she' is used as well, often to refer to nurses (Ekberg & Ekberg, 2017).

Gender related prejudices about health care professionals are not only present amongst professionals themselves, but also amongst patients. For example, some men patients prefer a doctor who is a man, believing that men are more competent as doctors than women (Himmelstein & Sanchez, 2016). Recent research, however, suggests that hospitalized patients with a woman medical internist have lower mortality rates compared to patients with a man medical internist (Tsugawa et al., 2017).





THE NEXT DAY...

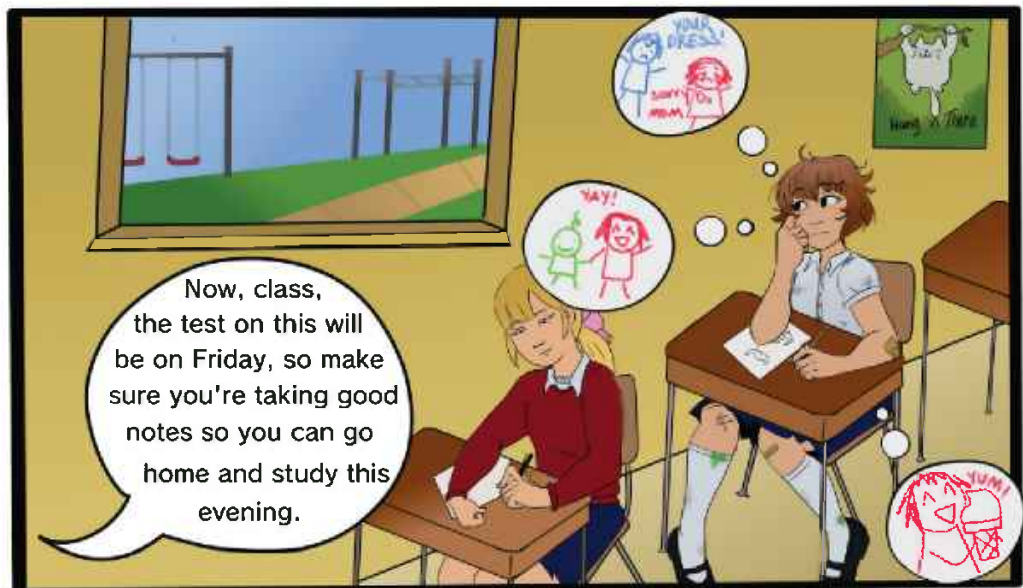


Gender and Mental Health in Children

Young boys and girls experience depression at equal rates, but the expression and symptomatology are different after puberty. Most notable is the fact that the occurrence of depression in girls is double that of boys. Girls may begin to express anxiety, eating disorders, and adjustment disorders, whereas boys may present with more externalizing disorders, such as behavioral and attentional complaints (Weller et al., 2006).

Girls can also have ADHD but may have a distinct symptom presentation, with internalizing symptoms (inattentiveness) being more prominent than externalizing symptoms (impulsiveness and hyperactivity). Girls with ADHD may develop better coping strategies than boys with ADHD and, as a result, can better mask or mitigate the impact of their ADHD symptoms. Greater awareness of gender on the part of health care professionals is necessary for proper diagnosis and treatment (Quinn and Madhoo, 2014).



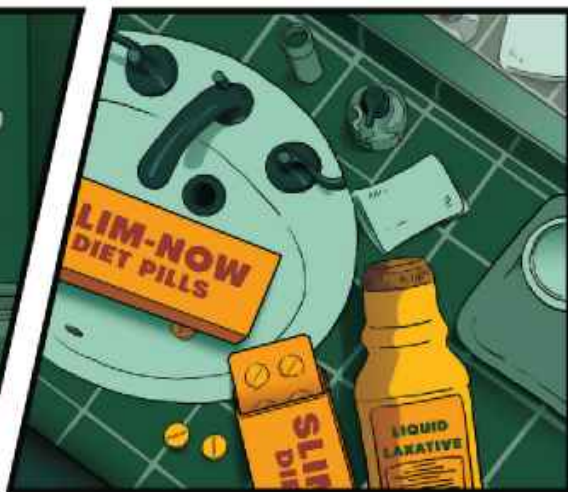


Gender and Binge Eating Disorders

Despite similar rates of binge eating disorders, women are more likely to receive treatment. It is believed that this may be due to lower awareness of eating disorders in men and a greater reluctance in men to seek treatment for something that is considered to be an eating disorder for women (Shingleton et al., 2015).

The results of one study with adolescents suggest that there are gender-specific risk factors for binge eating that also should be further investigated (Pace and Muzi, 2019). It is, therefore, important to consider gender in binge-eating disorders and treatments. Research should also consider gender in the recruitment of participants in binge eating disorder treatment trials.





ART BY: DAPPER DANIEL MCLAREN

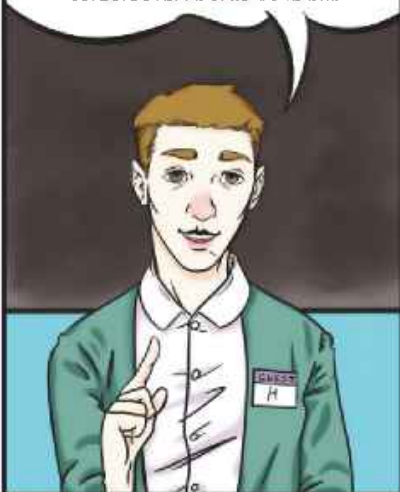
Gender and Dietetics

In Canada, approximately 5% of dietitians are men (Joy et al., 2019). In a study exploring the experiences of men who are dietitians, it was reported that societal gender divisions, division of genders within the profession, and isolation from mentors who are men may be barriers to the recruitment of men (Joy et al., 2019). Changing the perceptions of the profession, increasing role models who are men, and dismantling gendered practices may help diversify the profession.

Dietetic training programs often do not provide adequate knowledge or skills to students about the diversity of genders (Joy and Numer, 2018). Therefore, incorporating topics about gender diversity into dietetic curriculum, training programs, and research would also be helpful. Adding gender topics to the curriculum would help dietetic students to recognize that not all people identify within traditional binary gender roles or sexualities, empowering them to provide caring and compassionate nutritional care to all individuals.



TO SUM UP, GENDER IS A SPECTRUM. IT IS A PART OF YOUR IDENTITY AND SELF-EXPRESSION. YOU CANNOT ASSUME A PERSON'S GENDER BASED ON SOCIAL EXPECTATIONS. IT IS DIFFERENT FOR EACH PERSON AND THERE ARE MANY GENDERS UNDER THE RAINBOW. IF WE TIE DOWN GENDER INTO BINARIES, WE ARE ALSO SILENCING VOICES OF THE SPECTRUM; AN ACTION THAT CAUSES DISTRESS IN SOMEONE'S MENTAL STATE AND HEALTH.



IMAGINE WRITING A LETTER WITH A PURPLE INK PEN AND THE POST OFFICE DENIES TO DELIVER THE LETTER BASED ON A POLICY OF ONLY BLUE, BLACK OR RED. QUITE DISAPPOINTING ISN'T IT?

THAT IS WHY WE NEED DIETETIC PROFESSIONALS THAT HAVE KNOWLEDGE OF GENDER DIVERSITY, SO WE BETTER ADDRESS THE PHYSICAL AND MENTAL HEALTH OF ALL PEOPLE.



GENDER IN DIETETIC PROFESSIONALS

Speaker: PhD student H.

THEY DID A REALLY GOOD JOB! I NEVER REALLY THOUGHT ABOUT THE LACK OF GENDER TRAINING WE GET IN OUR EDUCATION.

YEAH, THEY ARE KINDA COOL AND GREAT DANCER!

YEAH, WE SHOULD DEFINITELY ASK FOR MORE — WAIT WHAT? HOW DO YOU KNOW?



WHY WOULDN'T YOU LIKE TO KNOW



Gender Stereotypes in Medical Education

In our study (Hiltner & Oertelt-Prigione, 2017), we explored how sex and gender are portrayed in German language cardiology books. We chose to look at the heart attack because the differences between men and women are well researched. Concerning sex differences, if women are considered as a subgroup at all, most of the time they are regarded as 'special' or 'atypical'. Although these sex differences are mentioned in some books, no book recommends how to diagnose or treat female bodies differently. Concerning gender differences, the books did not consider them at all, BUT showed stereotypes such as a caring wife that can be blamed if her reluctant husband is not helped in time during a heart attack. Another stereotype was that in medical personnel men were medical doctors and women were nurses (Hiltner & Oertelt-Prigione, 2017). These biases, concerning the content and the reproduced contexts, are harmful and are perpetrating heteronormative and binary gender assumptions (Hiltner & Oertelt-Prigione, 2017; Parker et al., 2017). This work is a good example that mentioning a possible sub-group can be discriminatory and that we still need more research on medical subgroups. Proper representation is then a first step to a more inclusive health care system.





MIDTERMS AREN'T EVEN CLOSE
BUT I COULD USE A HEADSTART



THE MEDICAL TERMS ARE SO STEREOTYPICAL AND FULL OF BUSES.
MEDICINE ISN'T THIS BLACK & WHITE ANYMORE.



THE BMI SCALE, THE WAY MEDICAL STAFF TREAT WOMEN'S PAIN,
GENDER IDENTITY AND SEXUAL LABELS



IT'S A NEW DECADE WITH
NEW INFORMATION

EVEN MORE....



HEART ATTACKS LOOK DIFFERENT
IN MEN AND WOMEN
MEDICAL TEXTBOOKS HAVE DONE POORLY IN
PORTRAYING THAT



WHEN REFERRING TO CERTAIN BIOLOGICAL PROCESSES
WE SHOULD AIM TO BE MORE GENDER NEUTRAL
IN OUR WORKING
(ALSO NOT ALL MEN HAVE PENISES AND NOT ALL
WOMEN HAVE UTERUS)



INTERSEX PEOPLE EXIST!
AND MEDICAL LITERATURE SHOULD INCLUDE THAT
THEY ARE NOT "ABNORMAL" NOR SHOULD
THEY BE "CORRECTED"
LET THEM CHOOSE!

Gender Bias in Depression Treatment

Gender bias sometimes occurs in the treatment of mental health problems (Smith et al, 2018). In general, men have higher levels of substance abuse and antisocial disorders (or externalizing disorders), while women have higher levels of anxiety and depression (or internalizing disorders). At the same time, in most western countries, mortality rates from suicide are substantially higher amongst men (WHO, 2012). One of the factors explaining this difference is that men in psychological distress are more reluctant to seek and accept professional help (Keohane & Richardson, 2018). Masculine norms also influence health care professionals' likeliness to offer help. For example, clinicians are more likely to diagnose depression in women compared with men, even when they have similar scores on standardized measures of depression or present with identical symptoms (Afifi, 2007).



GENDER BIAS IN MENTAL HEALTH CARE



YOU HAVE BEEN QUITE BUSY LATELY. RELAX AND LET'S SEE HOW YOU ARE DOING IN A MONTH.



I SUSPECT YOU HAVE A DEPRESSIVE DISORDER. YOU SHOULD THINK ABOUT SEEING A THERAPIST.



Gender Differences in Coping Styles

Coping mechanisms are employed when presented with managing physical or psychological stressors to maintain normal functioning.

Maladaptive coping can lead to negative health outcomes.

Social relationships affect health and wellbeing in adult women and men. Coeliac disease (CD) has an impact on social functioning as treatment is a gluten-free diet. Women often seek social support from friends, so avoidance can lead to an absence of emotion-based support triggering negative emotions including loss of self-confidence and social isolation (Roos, Hellström, Hallert, & Wilhelmsson, 2013).

Women report more social difficulties than men, often avoiding social events including meals and coffee with friends and relatives (Zingone et al., 2015).

Men with CD take risks in social contexts through deliberate non-adherence to a gluten-free diet. Men avoid disclosing CD to others due to self-stigma, wanting to be perceived as normal. By taking risks men with CD report less social isolation than women.

We need to be aware of how gendered social roles and identity shape coping strategies as these influence health (mental and physical) outcomes.





Gender and Management of Health

Chronic health conditions place a large burden on limited healthcare services. Active self-management can help reduce demand on services. Many chronic health conditions can be effectively self-managed in the home environment where family members are fundamental in providing support to promote positive health outcomes (Whitehead, 2017).

Diet has psychological and social implications as well as being fundamental for physiological needs. Family meals are associated with positive social and psychological benefits. Sharing meals and eating together can be challenging when catering for specific dietary needs potentially creating a fractured social structure and interpersonal conflict. Women are often responsible for dietary management (Ogden, 2011). Treatment for CD is a life-long gluten-free diet. Men with CD cook a gluten-free meal for the whole family in contrast to women who cook a gluten containing meal for family members and a separate gluten-free meal for themselves (Hallert, Sandlund, & Broqvist, 2003). Awareness of how gendered social roles and identities influence health behaviours can improve support for the self-management of chronic health conditions.





R. KIRBY '19

Gender and General Practitioners

Differences between women and men have been identified in all stages of the medical trajectory, from symptom presentation and health care seeking to diagnosis and treatment (FitzGerald & Hurst, 2017). Women are more likely to present somatic symptoms than men, women's symptoms are more intense and more frequent, and women are more likely than men to seek medical care when experiencing somatic symptoms (Ladwig et al., 2000; Barsky et al., 2001).

Once women visit their general practitioner, they are less likely than men to undergo physical examinations, women receive less diagnostic or preventive tests, and women are less likely to receive referrals for specialists to undergo surgery (Arber et al., 2006; Borkhoff et al., 2008; McKinlay et al., 2007). General practitioners are more likely to attribute symptoms of women patients to psychological causes, and somatic symptoms in women often remain medically unexplained (Claréus & Renström, 2019; Goudsmit, 1994). Like all people, health care professionals are prone to stereotypes related to socio-demographic characteristics such as age, socio-economic status, ethnicity, and also gender (Chapman et al., 2013). By becoming more aware of these unconscious implicit biases, general practitioners could improve the quality of care for all patients, independent of the patient's sex and gender.



H. suffers from back pain and decides to go to a General Practitioner.

If H were man ...



Meanwhile in the GP's office, if H were woman.



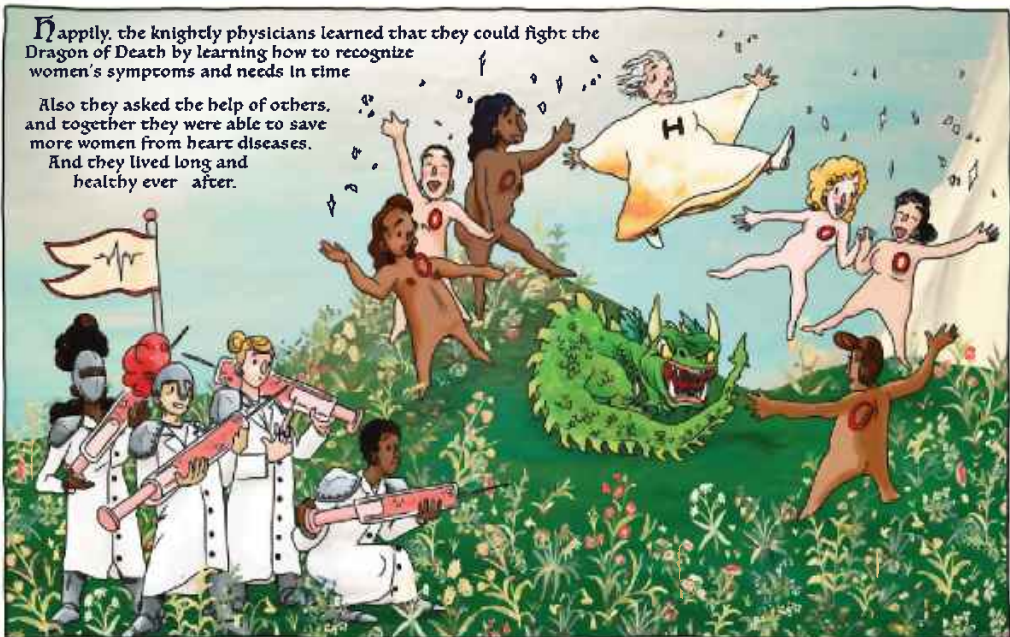
How to change this?



Gender and Heart Health

Women heart attack patients are less likely to survive acute myocardial infarctions when they are treated by men physicians, although these physicians try extremely hard to save these patients. Chances of survival among women, when treated by men physicians, increase when men physicians work with more women colleagues and when they have treated women patients before. Diversity in health care professions and recognition of symptoms in women will be advantageous in defeating myocardial infarctions. It is recommended to increase the presence of women physicians in the emergency department and to implement more training as for the "atypical" symptoms of heart disease in women in medical education (Greenwood et al., 2018).





Your Thoughts



Jot Down Some Ideas on How You Will Consider Sex and Gender in
Your Health Research

Your Thoughts



Jot Down Some Ideas on How You Will Consider Sex and Gender in
Your Health Research

Your Thoughts



Jot Down Some Ideas on How You Will Get Others to Consider Sex and Gender in Health

Artists

(in order of appearance)

Sex and Gender Comic:

Marie Lou Duret (she/they) is a French artist and general maker of things. Oscillating between tones of humour and intimacy, their work often explores issues of mental health, LGBTQIA history and archiving personal stories. They also continue developing their dissertation project (double MA English and Fine Art, Université Bordeaux Montaigne) focusing on the cartographic medium as a tool to map and archive someone's sexual and/or gender identity.

@marielousw19

Gender Typing Comic

Olivia Rea is an illustrator and concept artist based in Brisbane, Australia. She has a love of all things fantasy, and stories both dark and whimsical. She also enjoys watching clouds.

Gender and Health Care Professionals Comic

David Winters has been working as an illustrator for over 15 years, located in Toronto he enjoys working with themes and styles related to Horror, Pop Art and of course Queer Content. You can follow him at WintersINK.com

Gender and Mental Health in Children Comic

Noah Gray is an 18 year old in his last semester of high school, and currently pursuing an art career. Growing up in the southern United States, specifically central Louisiana, as a trans individual has not been easy, but continues to be interesting. After 5 years, and a surprising amount of support, Noah is still coming to peace with his expression of gender and looks forward to starting hormone therapy soon.

Artists

(in order of appearance)

Gender and Binge Eating Disorders Comic

"Dapper" Daniel McLaren is a comic book artist and illustrator based out of Toronto, ON, Canada. He is the creator of indie comic series QUEST, which is a sci-fi/fantasy epic with a major focus on inclusion and queer issues. Website: dapperdanielmclaren.com

Instagram/Twitter: @DapperDanSays, Patreon:

@DapperDanielMcLaren

Gender and Dietetics Comic

Jalex Noel is an amab genderquestioning, + , artist. Previous works include comics, illustrations for PhD paper, children books and magazine covers. They have also worked as curator and animator in and out of their country. From time to time, they enjoy playing around with glitter. For them art is a language that is used to speak, not to hear.

@jlx_nl

Gender Stereotypes in Medical Education Comic

Katelun Brewster (pronouns are she/her) is a 24 year old graphic design graduate from the Republic of Trinidad and Tobago in the West Indies that specialises in digital illustration and copywriting. She loves vibrant colours and interesting, almost silly, silhouettes in artwork and tries to incorporate that into her pieces.

Gender Bias in Depression Treatment Comic

Tim Singleton is a designer and illustrator from Toronto, Canada. His work specializes in dynamic typography, neon colour palettes and pop culture infused imagery.

Artists

(in order of appearance)

Gender Difference in Coping Style Comic+ Cover Art

James Iain Neish is a freelance artist who paints and works on independent comic book projects such as 'Stripling Warrior' by Brian Anderson and 'Hero' by Adam Sigrist. His work often focuses on the LGBTQ and intersectional experience, questioning ideas of race, culture, and sexuality. He resides in Halifax, Nova Scotia in a tiny apartment creeping with plants.

Gender and Management of Health Comic

Rob Kirby lives and works in Minneapolis. His solo books include *Curbside* (1998), and *Curbside Boys* (2002). His anthologies include two volumes of *The Book of Boy Trouble* (2006 & 2008), three issues of the Ignatz-nominated series *THREE*, the Ignatz Award-winning *QU33R* (2014), *What's Your Sign, Girl?* (2015), & *The Shirley Jackson Project: Comics Inspired by her Life and Work* (2016). Rob also writes reviews for *The Comics Journal* and *Publisher's Weekly*. He is currently at work on a graphic memoir, *Marry Me a Little*. Website: robkirbycomics.co

Gender and General Practitioner Comic

Corey Morgan is a transmasculine storyboard artist from Brisbane, Australia. His interest in telling meaningful, emotive, and queer stories is what drives him in his field of work.

Gender and Heart Health Comic

David Mahler is an Australian/Canadian comic artist and filmmaker. Their books *'Deep Park'*, *'Junior Catharsis'*, and *'The Secret Ingredient'* were published by Pikitia Press and Tree Paper Comics. Their work has been published in *The Lifted Brow*, *The Suburban Review*, *Palooka Magazine*, *Entropy Magazine* and more.

Authors



Alina Cosma is a postdoctoral researcher at Utrecht University, Dept of Interdisciplinary Social Sciences in the Netherlands. In the last 8 years, Alina has done intensive research on child and adolescent health and well-being with a focus on school bullying, mental health, and sexual gender minorities youth. At the moment she works on a project in which she explores whether today's adolescents (iGeneration) do report more mental health problems and lower well-being and if so, what could explain these. In her research, one big focus is looking and explaining gender differences.

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Ilona Plug works as a PhD candidate at the Radboud University in Nijmegen. In her project she combines the research disciplines of language and communication, gender, and health, by studying the role of sex and gender in language use in interactions between general practitioners and patients with common somatic symptoms.

ilona.plug@gmail.com; @Ilona_Plug



Phillip Joy is a PhD candidate in the Faculty of Health, at Dalhousie University in Halifax, Canada. His research explores the way cultural discourse and gender shape eating practices and body image for gay men. He uses arts-based methodologies and has released a comic anthology, entitled Rainbow Reflections. He can be contacted at

pjoy@dal.ca and @PhillipJoy2

Authors

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[Sarah Hiltner](#) is currently a PhD researcher at the Department of General Practice of the Radboud university medical center Nijmegen, the Netherlands. Her research is about innovation in medical education with a special focus on the implementation of gender-sensitive knowledge into medical education.

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[Tessa Magnee](#) is a researcher in the field of mental health care & health services research. Currently she works at Research Institute IVO and as a psychologist in a primary health care center. She obtained a PhD by writing a thesis on mental health care in general practice.

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