

**Differences in Gender Role Beliefs Among Eastern and Western European Women
and Their Relationship to Well-being**

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Abstract

Gender roles are socially constructed expectations about what each gender should represent within society. They range from conservative-traditional to progressive-egalitarian roles and their prevalence differs per culture. Exposure to traditional gender roles has been associated with a decrease in one's well-being, especially in modern women. However, it is still unknown whether women's own beliefs about gender roles or the existence of gender differences have an impact on their perceived well-being. Therefore, the present study aimed to examine the differences in beliefs about gender roles among women in Eastern and Western Europe, and their impact on well-being. A mixed methods approach, with an open-ended question and two questionnaires measuring perceived well-being and gender role beliefs, was implemented. The dataset consisted of a total of 93 participants aged between 30 and 50, representing Eastern and Western European cultures. Both results from the qualitative and quantitative analysis revealed that Eastern European women have more traditional gender role beliefs than Western European women. Nevertheless, no significant moderation effect of culture on the relationship between gender role beliefs and well-being was found. Future studies should consider including perspectives from other genders to gain a broader understanding of gender role beliefs and their possible relationship to well-being. It is especially important to use a more nuanced approach to the conceptualisation of culture and not solely reduce it to one's nationality. In addition, further evaluation of different tools measuring gender role beliefs is needed to create one consistent measurement of gender role beliefs. This study contributed academically to a better understanding of modern gender role beliefs among women in Europe.

Keywords: women, gender roles, gender role beliefs, well-being, Eastern European culture, Western European culture

Differences in Gender Role Beliefs Among Eastern and Western European Women and Their Relationship to Well-being

The existence of differences between men and women has been a topic of debate among academics and the general public (Dillen, 2022); the perception of such disparities can manifest themselves in societal expectations and attitudes towards gender-specific behaviours.

Contemporary scientific research has established that men and women exhibit biological and physical diversity, including differences in hormonal responses, body fat distribution, and muscular strength (Cheuvront et al., 2005; Karastergiou et al., 2012; Lauretta et al., 2018; Michalsik & Aagaard, 2015). Nonetheless, there is still no scientific consensus on whether there are psychological differences between men and women. Moreover, there is a significant lack of research examining whether the well-being of the general public is affected by such beliefs.

In the 21st century, numerous studies have suggested that the prevalence of certain mental conditions may vary based on sex. To exemplify, ADHD and addictions have been found to be more prevalent in men, while mood-related disorders, such as depression and anxiety, appear to be more common in women (Barkley, 2005; Bezruczyk, 2023; Burt & Quezada, 2018; Green et al., 2019; Seedat et al., 2009). Although some researchers have confirmed these findings, others have produced contradictory results, indicating the opposite prevalence rates of mental disorders or insignificant differences between sexes (Faheem et al., 2022; Seney & Sibille, 2014; Torrens et al., 2021). According to Hyde et al. (1990), men and women differ solely in their physical and biological characteristics, not in their psychological attributes. Hyde adds that the majority of research claiming the existence of psychological differences between men and women is inconsistent with scientific data and that considering these studies as truthful can lead to various forms of harm for many individuals (Hyde, 2005).

'Sex' vs 'Gender'

The lack of scientific consensus on whether there are psychological differences between genders lies in the interchangeable use of the terms 'sex' and 'gender', despite their crucial distinction in meaning (Bell, 2016). 'Sex' refers to biological factors such as reproductive functions and the expression of genes on X and Y chromosomes (Bell, 2016). Conversely, 'gender' encompasses the social and psychological characteristics associated with being one gender, including behaviours, norms, and roles (Gale-Ross et al., 2009; World Health Organization [WHO], 2019). Furthermore, according to Gender Role Theory, gender generates diverse cultural expectations based on individuals' gender identities. These expectations, commonly known as gender roles, are grounded in societal values and beliefs regarding individual behaviour and lifestyle in both the public and private realms (Blackstone, 2003; Foss & Littlejohn, 2008; Tong, 2012). Therefore, unlike sex, gender is a social construct shaped by historical and contemporary human interactions that do not exist as an objective reality and is prone to changes over time (Burr, 2015; WHO, 2019).

Gender Roles

The diversity in expectations of one's gender led to the creation of different types of gender roles, namely traditional, egalitarian, and transitional (Somech & Drach-Zahavy, 2016). The traditional dimension encompasses gender roles that have been present in society for a long time, where men and women embody hyper-masculine and hyper-feminine features in their personality, domestic behaviour, occupation, and physical appearance (Planned Parenthood, 2017; Somech & Drach-Zahavy, 2016). Within this dimension, men are portrayed as possessive and dominant 'alpha males', while women are seen as objects of male desire in need of protection and care (Bromberg & O'Donohue, 2013). Frequently, individuals who support or

portray traditional gender roles are convinced that men and women have many mental differences based on the evolution theory, which emphasises processes of sexual selection between species (Buss et al., 2001; Buss & Schmitt, 2011). In contrast, the egalitarian dimension advocates against gender segregation in societal roles. Individuals with egalitarian beliefs align with the Gender Schema Theory, which suggests that gender differences arise mainly from upbringing and societal influence. Therefore, egalitarian gender roles presuppose that people of any gender can equally undertake work and household tasks (Somech & Drach-Zahavy, 2016). Lastly, the transitional dimension refers to gender roles that lie between traditional and egalitarian where, for example, a person might accept that women achieve their career goals only when they also devote their time to the family domain. However, these beliefs can vary greatly among individuals, as they may adopt different ideas from other dimensions. Altogether, these dimensions of gender roles, ranging from conservative traditional roles to progressive egalitarian roles, demonstrate that gender role beliefs extend across a spectrum, influencing individuals' life experiences and shaping their beliefs about what each gender should represent.

Gender Role in Relation to Women's Well-Being

Studies exploring the influence of different types of gender roles on individuals have consistently demonstrated that exposure to traditional gender roles has a detrimental impact on women's well-being (Martz et al., 1995; Sharpe & Heppner, 1991). Firstly, in occupational and educational environments women are portrayed as less competent than men, leading to predominantly male occupations with limited female role models. Consequently, it diminishes the career well-being of women aspiring to pursue STEM (science, technology, engineering, and mathematics) careers (Yu & Yang, 2022). Secondly, traditional gender roles normalise domestic and sexual abuse against women as hyper masculine characteristics of men, such as higher

aggression and lower emotional stability, are used as an explanation or excuse for men's perpetrator acts (Carlyle et al., 2017; Tolman & Rosen, 2001; Umberson et al., 1998). Hence, it leads to danger not only for perceived well-being but also for physical health.

The existing research has highlighted the strong negative association between exposure to traditional gender roles and women's well-being, but has not focussed on internal gender role beliefs and well-being. The only existing study on this topic has shown that an egalitarian mindset is linked to greater social well-being in the form of freedom of self-expression (Steckermeier & Delhey, 2019). This freedom allows people within society to feel seen and treated as equal, enhancing their social worth. Notwithstanding, it remains unclear whether women's own beliefs about gender roles or the existence of gender differences have an impact on their perceived well-being.

Differences Between Gender Role Beliefs in Eastern and Western Europe

Ample research has established that gender role beliefs may vary across cultures due to factors such as history, religion, socioeconomic status, geography, language, and current politics (Ishii & Eisen, 2020; Nunn, 2012; Stolarek, 2020). The Cultural Dimensions Theory, proposed by Hofstede (1993; 2011), explains how societal values related to gender can be understood through the dimension of 'masculinity-femininity.' The sub-dimension of 'masculinity' characterises conservative, gender-stereotyped, male-dominated cultures, while the sub-dimension of 'femininity' includes emotionally balanced, helping, and gender-neutral cultures. These sub-dimensions relate to types of gender role beliefs, where the 'masculine' dimension represents traditional gender roles and the 'feminine' dimension the egalitarian gender roles. Therefore, the extent to which a culture confirms a specific sub-dimension can give insight into its dominant gender role belief type.

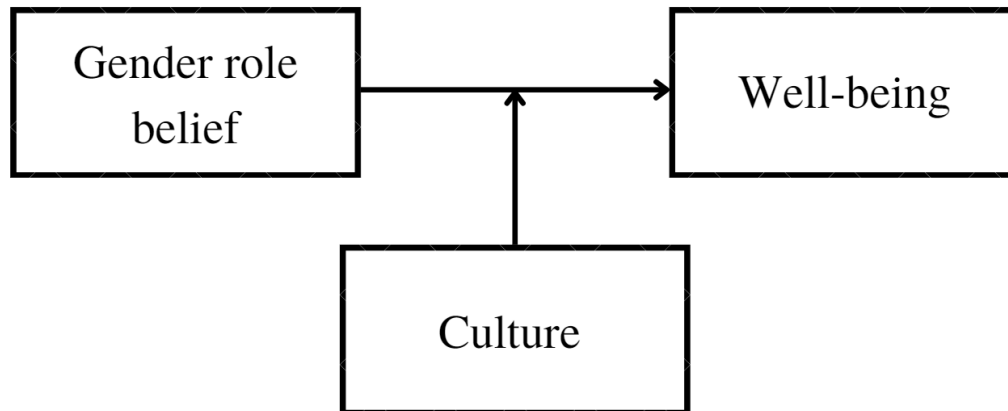
A distinct contrast can be observed between Eastern and Western Europe, where notable cultural differences exist in terms of the 'masculinity' and 'femininity' dimensions (Hofstede, 2010). Particularly, Eastern European countries often exhibit traditional or conservative values regarding gender roles, therefore demonstrating a more 'masculine' dimension (Dimitrov, 2003). In contrast, Western European countries represent a more 'feminine' dimension by prioritising egalitarian values and promoting greater gender equality (Wike et al., 2019). The study by Grunow et al. (2018) found that egalitarian beliefs were the highest in the Netherlands, Sweden, and Germany, and the lowest in Switzerland, Poland, and the Czech Republic. Considering the notable division between Eastern and Western parts of Europe in their beliefs about gender roles, it becomes plausible to suggest that culture is a potential moderator between women's own beliefs about gender roles and their perceived well-being.

Present Research

The purpose of this study is to examine the differences in beliefs about gender roles among women in Eastern and Western Europe, and their relationship to well-being. First, this study will qualitatively and quantitatively explore women's beliefs about gender roles and gender differences to identify the interaction effect and any possible patterns between Eastern and Western European women. Accordingly, it is expected that Eastern European women have more traditional gender role beliefs than Western European women. Second, this study will explore if culture is a possible moderator between gender role beliefs and women's perceived well-being (see Figure 1). In particular, it is expected that Eastern European women have more traditional gender role beliefs and lower levels of well-being, while Western European women have more egalitarian gender role beliefs and higher levels of well-being.

Figure 1

Conceptual model of the hypothesis that culture moderates the relationship between gender roles beliefs and well-being.



Methods

Design

A mixed methods design, collecting both qualitative data and quantitative data to mitigate the disadvantages of the different methodologies, was used to gain a comprehensive understanding of the phenomenon of women's gender role beliefs. To ensure data protection and confidentiality of participants, the study received approval from the Ethics Committee of the University of Twente, located within the Faculty of Behavioural, Management, and Social Sciences (BMS), no 230111. This approval was obtained before the recruitment of the participants.

Participants

For the purpose of this study, a convenience and snowballing sample was chosen due to the relatively small population of interest. The primary inclusion criteria for participants were nationality, gender, age, and language proficiency. Specifically, only cisgender and transgender women from Europe, aged between 30 and 50 years old, who are proficient in either English, Dutch, German, or Polish were asked to participate in the study via social media. In total, the study resulted in 93 participants between the ages of 30 and 50 ($M = 40.25$, $SD = 6.25$, with Polish ($n = 25$), German ($n = 29$), Dutch ($n = 38$), and Other ($n = 1$) nationalities. Other differences in sociodemographic characteristics can be seen in Table 1.

Table 1

Baseline Sociodemographic Characteristics of Participants Based on the Culture Variable.

	Western European ($n=67$)	Eastern European ($n=26$)	Full sample ($N=93$)
Age, M (SD)	40.38 (5.83)	40.19 (6.44)	40.25 (6.25)
Education level, n (%)			
Elementary school graduate	15 (22%)	0 (0%)	15 (16%)
Highschool graduate	9 (13%)	11 (42%)	20 (22%)
Bachelor degree	23 (34%)	2 (8%)	25 (27%)
Master degree	15 (22%)	13 (50%)	28 (30%)
PhD degree	5 (9%)	0 (0%)	5 (5%)

Job status, n (%)

Full-time	27 (40%)	22 (85%)	49 (53%)
Part-time	36 (54%)	3 (12%)	39 (42%)
Currently unemployed	1 (1%)	0 (0%)	1 (1%)
Prefer not to say	3 (5%)	1 (3%)	4 (4%)

Note. N = 93. Participants with German and Dutch nationality were put together in the Western European group, whereas Polish and Other (Turkish) participants were put together in the Eastern European group.

Procedure

Participants were contacted via social media platforms such as WhatsApp, Instagram, Facebook, and LinkedIn, where they were asked to participate in a mixed-methods study by completing an online questionnaire via Qualtrics (www.qualtrics.com). In addition, they were given a choice to forward the study invitation to women who would be interested in joining the study. Participants could complete the questionnaire in English, Dutch, German, or Polish, depending on their language preference. At the beginning of the survey, participants received an informed consent sheet with all essential information about the study and the presented survey. Participants who gave their consent were then asked to fill out questions concerning their demographic information and instructed to fill in surveys measuring their perceived well-being and gender role beliefs. The whole questionnaire took approximately 30 minutes to complete. At the end of the questionnaire, participants were invited to provide their email addresses in case they would be interested in further studies about flourishing women. This email address has not been connected to the data of the participants. Lastly, participants were thanked for their

participation and received the researchers' contact information in case of additional questions.

Materials

The study is part of a larger research project that consisted of four questionnaires and three open questions. Nonetheless, for the current study, one open question and two surveys measuring well-being and gender role beliefs were used.

The Open-Ended Question

To obtain participants' insights on gender roles and beliefs on differences between genders one open-ended question 'Do you think there are any differences, except physical attributes, between a man and a woman? If yes, can you give three examples?' was used. This qualitative measure was present at the beginning of measurements to obtain answers that are not influenced by the following questionnaire about gender role beliefs.

The Gender Role Beliefs Questionnaire

To evaluate participant's type of gender role beliefs the questionnaire named Gender Role Beliefs Questionnaire (GRBQ) was used. The GRBQ was created specifically for this study since many other gender-related questionnaires did not seem to catch all aspects of gender role beliefs. To exemplify, the Gender Role Belief Scale focuses only on male and female behaviour and uses old-fashioned words such as 'gentlemen' to refer to a man, whereas the Bem Sex Role Inventory contains only items representing stereotypical personality traits of each gender. Unlike other questionnaires, GRBQ includes a variety of items based on previously made surveys and research articles that measure traditional and egalitarian behaviour and stereotypical personality traits of both men and women (see Appendix A and B).

Overall, the GRBQ consists of 16 items that measure traditional and egalitarian dimensions of gender role beliefs about men and women, for example, 'Women are more

affectionate than men.' (Appendix C and D). The answers could be given on a 5-point Likert Scale ranging from 'strongly disagree' (1) to 'strongly agree' (5). A person exhibits traditional, egalitarian, or transitional gender role beliefs depending on their total score on the dimensions of traditional and egalitarian gender role beliefs (Appendix E). Generally, a person has traditional gender role beliefs if their score is higher than 64 and egalitarian gender role beliefs if their score is lower than 31. Other scores result in transitional gender role beliefs that can be either prone to traditional (63-48) or egalitarian (47-32) gender role beliefs. In this research study, Cronbach's alpha for the GRBQ was .83 representing good internal consistency.

Mental Health Continuum - Short Form

To assess the participant's general level of well-being, the Mental Health Continuum - Short Form (MHC-SF) was used. This questionnaire contains 14 items measuring emotional, social, and psychological well-being (Keyes, 2009). Each item represents a statement of feelings of which the participant needs to indicate how frequently they agreed with the statement over the past month, for instance 'During the past month, how often did you feel satisfied with life?'. The answers could be given on a 6-point scale ranging from 'never' (0) to 'almost always' (5). The higher participant's mean score on the MHC-SF, the greater the general well-being they represent. The MHC-SF has high internal reliability, significant convergent validity, and significant discriminant validity (Lamers et al., 2011). In this research study, Cronbach's alpha was .93 representing excellent internal consistency.

Data Analysis

The qualitative data from the open-ended question was analysed using Atlas.ti (Version 23.1.1.0). The dataset was divided into two subsets of the *culture* variable, namely Eastern and Western European. Consequently, all participant's answers were read multiple times. Afterwards,

one researcher coded inductively all responses by using three codes of gender differences: *internal differences*, *external differences*, and *no differences*. Afterwards, the codes of internal and external differences were examined in more detail to find subcodes of different gender beliefs; each code could have multiple subcodes if it contained different types of gender beliefs. After coding, the content analysis was used to see which codes and subcodes were present in Eastern and Western European cultures.

The quantitative data from the GRBQ and the MHC-SF was analysed using the statistical data analysis software RStudio (Version 2023.03.0). Firstly, descriptive statistics, such as mean and standard deviation (SD), were calculated to assess the central tendency and the dispersion of the data. Consequently, the data were tested for the parametric assumptions. The assumptions of linearity, homogeneity of variance, and normality were met because the plots showed no anomaly in the distribution of residuals. The assumption of multicollinearity was also met by using Pearson's correlations for numerical variables, well-being and gender-role beliefs, and Point-Biserial correlations for the categorical variable *culture*; which was assigned a numerical value of (1) and (0) for Eastern and Western European nationality respectively. Afterwards, the results of GRBQ were obtained for further analysis. Subsequently, moderation analysis was conducted using multiple linear regression models, where the type of *gender role beliefs* was the independent variable, well-being was the dependent variable, and *culture* was the moderating variable. In total, the analysis consisted of three models (one from quantitative and two from qualitative data) that had different independent variables: a total score from the GRBQ was used as an independent variable for Model 1, whereas the most common gender differences, namely cognitive and personality differences, were used in Model 2 and 3 respectively. The moderation

is significant when $p < .05$ in the interaction of two predictor variables of *gender role beliefs* and *culture*.

Results

Qualitative Analysis of Gender Role Beliefs

The qualitative analysis of the open-ended question about gender role beliefs resulted in a total of six types of differences between genders, where four subcodes belong to internal differences, and one subcode belongs to external differences (Table 2).

The majority of types of internal gender differences included *personality* (28%) and *cognitive* (26%) *differences*. Examples of three coded quotes from each type are, 'perception of the world, instincts', 'approach to duties, attitude towards yourself, and thinking about yourself', and 'way of thinking' for *cognitive differences* and 'men tend to be more willing to take risks', 'women are more sensitive, empathetic, and considerate', and 'men are less caring' for *personality differences*. When looking at the external differences between genders, only 15 % of all participants included *social differences*. The example quotes from this type manifested themes such as variations in reputation, earnings, media influence, and situations such as 'women worry about going out alone at night'. In addition, only five of all answers indicated that there are *no differences* between genders and they all came from Western European women.

Table 2

Results of the Qualitative Analysis from the Open-Ended Question "Do you think there are any differences, except physical attributes, between a man and a woman?".

Codes	Definition	Example Quote	Eastern European (n=32)	Western European (n=91)	Total (N =123)
Internal, n (%)			30 (93%)	70 (77%)	101 (82%)
Personality differences	Differences that revolve around diverse personality traits and facets.	"Women are often more socially agreeable and social, whereas men are rather pragmatic."	10 (32%)	25 (27%)	35 (28%)
Cognitive differences	Differences that involve cognitive abilities such as thinking, learning, problem-solving, and perception.	"Differences in intellect, women are more task-oriented, can do several things at once, [...]"	12 (38%)	20 (22%)	32 (26%)
Emotional differences	Differences that involve expressing, understanding, and processing emotions and feelings.	"On average, women seem to me more empathetic, emotionally stronger, [...]"	4 (12%)	14 (15%)	18 (15%)
Behavioural differences	Differences that include any type of act towards oneself or others.	"Women are [...], better at caring for children"	4 (12%)	11 (12%)	15 (12%)
External, n (%)			2 (6%)	21 (23%)	23 (18%)
Social differences	Differences in circumstances or social situations that affect one's lifestyle.	"Salary, power at work, men don't have to worry about going out alone at night, we women do"	2 (6%)	16 (18%)	18 (15%)
None, n (%)	No differences mentioned by the participant.	"You cannot determine this in general, so no."	0 (0%)	5 (6%)	5 (4%)

Note. N=121. Internal codes are about psychological differences between genders, whereas external codes are about non-psychological differences between genders.

A closer analysis of the table shows more diversity in codes between cultures. In general, (94%) of codes from Eastern European and (76%) from Western European participants were internal, suggesting that most women still believe that there are psychological differences. This becomes especially clear when looking at the number of subcodes in *social differences*, where 16 answers were from Western European and only two from Eastern European culture. Moreover, without taking into consideration the code of *no differences*, the highest number of subcodes from Eastern European participants was present in *cognitive differences* (38%) and lowest in *social differences* (2%). In contrast, the greater number of codes from Western European participants was present in *personality differences* (27%) and the lowest in *behavioural differences* (12%).

Besides cultural differences, an interesting pattern was found in the responses of the participants. When women mentioned differences in females, even ones that are generally considered to be stereotypical for their gender, they described them with a certain positive tone. This can be illustrated by the following quotes: 'On average, women seem to be more empathetic, emotionally stronger, more organised, especially with regard to everyday family life', 'Most women are more sensitive and careful. More caring by nature and therefore quicker accountability for care tasks within a family, for example', and 'Women are more emotional, reasonable, and better at caring for children'. In contrast, when women mentioned men in their responses, they predominantly attributed them with negative traits and attributes. The example quotes are: 'Men have one-track "understanding" of the environment, often lack logic in action, lack of awareness of the consequences and consequences of certain behaviours or actions taken', 'Men don't listen well', 'Men, unlike women, are lazy, irresponsible and unimaginative', and 'Men mostly only think and take care of themselves'. These findings indicate a tendency among

the women participating in this study to embrace a sense of female gender superiority by accepting positive traditional gender role traits associated with femininity while rejecting negative ones and by giving negative traits and attributes to men.

Quantitative Analysis of Gender Role Beliefs

The outcomes of the quantitative data on gender role beliefs indicate that the majority of participants (74%) have transitional gender role beliefs, out of which 14% were more traditional and 60 % more egalitarian (Table 3). In general, participants scored crucially higher on egalitarian gender role beliefs (26%), in comparison to traditional gender role beliefs (0%). Moreover, results between cultures reveal that a superior number of Western European participants (93%) belong to more egalitarian dimensions than Eastern European participants (69%). In contrast, a greater number of Eastern European participants (31%) belong to more traditional dimensions than Western European participants (7%). Even though a certain pattern is visible, both cultures seem to be fluctuating on the transitional dimension (100% for Eastern European and 64% for Western European women), making their gender role beliefs less extreme and more balanced than expected.

Table 3

Differences Between Types of Gender Role Beliefs Present in Eastern and Western European Women.

Gender Role Beliefs Type	Definition	Eastern European (n=26)	Western European (n=67)	Total (N=93)
Traditional, n(%)	Beliefs adhering to the notion that men and women have distinct and predetermined roles within society based on their gender.	0 (0%)	0 (0%)	0 (0%)
Transitional towards traditional, n(%)	Beliefs that are transitional but are more prone to be traditional.	8 (31%)	5 (7%)	13 (14%)
Transitional towards egalitarian, n(%)	Beliefs that are transitional but are more prone to be egalitarian.	18 (69%)	38 (57%)	56 (60%)
Egalitarian, n(%)	Beliefs adhering to the equal behaviour, responsibilities, and rights of individuals regardless of their gender.	0 (0%)	24 (36%)	24 (26%)

When taking into consideration both results from qualitative and quantitative analyses on gender role beliefs, a similar pattern occurs between cultures. Both Eastern and Western cultures are exhibiting more transitional gender role beliefs than purely traditional or egalitarian.

Nevertheless, the gender role beliefs of Eastern European women seem to be more traditional than Western European women. Hence, the expectation that Eastern European women have more traditional gender role beliefs than Western European women is confirmed.

Gender Role Beliefs, Culture and Their Relationship to Well-being

Descriptive analyses revealed that participants scored relatively high on *well-being* ($M = 4.20$, $SD = .96$) and medium on *gender role beliefs* ($M = 37.94$, $SD = 9.32$). Furthermore,

correlation coefficients proved that *well-being* has a weak-negative correlation with *culture* $r(93) = -.32, p < .001$; Eastern European women scored lower on *well-being* ($M = 3.76, SD = .97$) than Western European women ($M = 4.39, SD = .89$). Another weak-negative correlation was found between *well-being* and *gender role beliefs*, $r(93) = -.31, p = .002$, meaning that the more traditional gender role belief a person shows, the lower their well-being should be. Lastly, *culture* had a significant negative correlation with *gender-role beliefs*, $r(94) = -.52, p < .001$.

Additionally, the results from the moderation analysis are presented in Table 4. This analysis revealed a non-significant effect of *culture* on the relationship between *gender-role beliefs* and *well-being*, $t(3,89) = -.09, p = .928$, a non-significant effect of *culture* on the relationship between *cognitive differences* and *well-being*, $t(3,29) = -.98, p = .331$, and a non-significant effect of *culture* on the relationship between *personality differences* and *well-being*, $t(3,32) = -1.47, p = .144$. From these results, it can be concluded that there is no significant moderation of *culture* on the effect of *gender role beliefs* on *well-being*.

Table 4

Results of Moderation Analysis of Culture Variable on the Relationship Between Gender Role Beliefs and Well-being from Quantitative Data (Model 1) and Qualitative Data (Model 2 & 3).

Effect	Estimate	SE	<i>t</i> -value	<i>p</i> -value
Model 1 (N = 94)				
(Intercept)	5.09	.47	10.76	<.001
Gender Role Beliefs	-.01	.01	-1.52	.133
Culture ^a	-.61	1.39	-.44	.661
Gender Role Beliefs*Culture	.01	.03	.09	.928

Model 2 (N = 32)

(Intercept)	4.35	.13	32.27	<.001
Cognitive Differences ^b	.18	.25	.71	.48
Culture ^a	-.52	.28	-1.86	.066
Cognitive Differences*Culture	-.43	.44	-.98	.331

Model 3 (N = 35)

(Intercept)	4.28	.14	30.31	<.001
Personality Differences ^c	.33	.23	1.42	.159
Culture ^a	-.45	.27	-1.68	.09
Personality Differences*Culture	-.64	.44	-1.47	.144

Note. ^a 0 = Western European, 1 = Eastern European. ^b 0 = No code was present, 1 = A code of cognitive differences was present. ^c 0 = No code was present, 1 = A code of personality differences was present.

Discussion

The purpose of this study was to explore differences in beliefs about gender roles among women in Eastern and Western Europe, and their relationship to well-being, using a mixed-method approach. Firstly, it was expected that Eastern European women would have more traditional gender role beliefs than Western European women. The results of the mixed methods were found to be in line with this expectation. The responses to the open-ended question by Eastern European participants were focused predominantly on internal differences, while Western European participants put more emphasis on external differences. Accordingly, traditional gender role beliefs were more present among Eastern European participants. Likewise, the quantitative analysis confirmed that Eastern European women hold slightly more

traditional gender role beliefs compared to Western European women. Secondly, it was expected that culture moderates the relationship between gender role beliefs and perceived well-being, meaning that Eastern European women would have more traditional gender role beliefs and lower levels of well-being, while Western European women would have more egalitarian gender role beliefs and higher levels of well-being. Nonetheless, the moderation analysis revealed that culture does not influence the perceived well-being of women who have more traditional gender role beliefs. Consequently, these main findings will be discussed in the presented order.

Main Findings

Differences in Gender Role Beliefs

The results of both the qualitative and quantitative analysis of gender role beliefs demonstrated that Eastern European women hold slightly more traditional gender role beliefs compared to Western European women. This finding is in line with the Cultural Dimensions Theory and research by Grunow et al. (2018), which exemplifies how Eastern and Western European countries differ in dimensions of 'masculinity' and 'femininity', leading to more traditional and egalitarian gender role beliefs, respectively.

However, the difference between these two regions is not as pronounced as expected, suggesting a potential shift toward more egalitarian gender role attitudes among Eastern European women. In particular, the quantitative analysis revealed that the majority of women in the study held more transitional gender role beliefs than exclusively traditional or egalitarian beliefs. Ample research has identified a slow trend of attitudinal convergence towards egalitarianism in many developed countries since the Women's empowerment movement (Firestone & Harris, 1998; Inglehart & Norris, 2004; Jackson, 2006); many scholars consider this trend as a natural process of societal progression. For example, a study by Scharle (2014)

identified that despite tendencies to traditional beliefs, countries like Poland and the Czech Republic promote certain egalitarian behaviours, for example, fathers' involvement in child care, which increases their 'feminine' dimension. Another explanation could lie in the application of methodologies that use transitional gender role beliefs as a part of a linear continuum from traditional to egalitarian gender role beliefs, which is criticised in the research by Knight & Brinton, (2017). According to these researchers, such methodologies (including the GRBQ) fail to capture the complexity of gender role beliefs and often result in a large number of transitional beliefs about gender roles, as observed in this study.

Perhaps the most interesting yet unanticipated finding came from the qualitative analysis, where participants' responses showed women in a positive light and men in a negative light, giving the impression of female gender superiority. This phenomenon can be explained by in-group bias, which refers to differences in mental associations between 'us' (females) and 'they' (males), where people tend to favour one's group over other groups (Saarinen et al., 2021). This bias is often associated with prejudice in the form of explicit or implicit biases, where individuals are aware of their prejudicial assumptions or hold them subconsciously (Fridell, 2013; Payne & Hannay, 2021; Saarinen et al., 2021). It is unclear whether women in this study were aware of their prejudicial attitudes towards men, but their answers seem to exhibit a consistent pattern. Another explanation could stem from female chauvinism, a belief that the female gender is better than the male gender; however, the research in this field is limited, making it difficult to draw any conclusions.

Gender Role Beliefs in Relation to Well-being

Results from the moderation analysis demonstrated that culture does not influence the relationship between gender role beliefs and well-being. One possible explanation for this finding is that in this study *culture* was represented only as a geographic tradition (nationality), which might be too broad to fully capture the complexity of culture. To comprehensively understand the concept of culture, variables such as religious or political values, family dynamics, and educational level should be included as separate moderators of the relationship between gender role beliefs and well-being. For instance, Gove (2018) identified that a dominant family environment during youth, which promotes deviant behaviour, influences future gender roles and leads to low psychological well-being. Additionally, a study by Firestone & Harris (1998) points out how family background and high educational levels influence egalitarian beliefs in women. Hence, the inadequacy of using culture as a representation of one's nationality could have led to the insignificant moderation effect found in this study.

Strengths and Limitations

This research has several distinguishable strengths. Firstly, the study is based on the mixed-methods approach employing both qualitative and quantitative data analysis of gender role beliefs. Due to the combination of both methods, the results are likely to yield the most comprehensive picture of women's gender role beliefs, where any deviant dimensions are treated as a new insight into the overall phenomenon (Jick, 1979; Oppermann, 2000; Thurmond, 2001). Secondly, the study has a diverse sample of participants who vary in nationality, age, educational background, and working situation, leading to a significant representation of European women between 30 and 50 years old. Furthermore, the overall sample size is large for qualitative and

acceptable for quantitative research, yielding statistically significant results (Delice, 2010; Mason, 2010).

Although the present study has strengths, it is crucial to recognise several potential limitations. The main limitation of the current study is the unequal group size, meaning that the majority of the participants are from the Western European culture. This disproportion might have reduced the statistical power of the moderation analysis, making it difficult to detect significant differences between cultures (Aguinis, 1995). Consequently, the small group size of Eastern European participants, compared to the Western European participants, could register all results as higher or lower than they are. The second potential limitation of this study concerns the quantitative measurement tool of gender role beliefs. Even though the GRBQ indicated good internal reliability, two factors could inhibit the validity of this questionnaire. Primarily, the GRBQ was translated into three languages by members of the research team, which could result in variations in the meaning of items and questions. Even minor variations can cause confusion or misinterpretation in participants' responses, consequently affecting the validity and reliability of the data (Harkness et al., 2003; Sousa & Rojjanasrirat, 2011). Besides the translating issue, this study did not perform a pre-test of the GRBQ, which is highly beneficial when applying a new measurement tool; the examination of the new survey instrument helps to identify ambiguous or confounding questions and to recognise any potential biases (Converse & Presser, 1986). Therefore, the study's ability to collect and analyse data on gender role beliefs may be compromised. The third potential limitation concerns the validity of the qualitative data. As the coding process was done by only one researcher, there is a risk that the interpretations and conclusions may be subjective, leading to a confirmation bias, and not representative of the true meaning of the data (Casad & Luebering, 2023; Kuckartz, 2014).

Implications for Future Research

Based on the main findings and limitations of the present study, certain implications arise for future research. Firstly, future studies should include more balanced group sizes of participants from different cultures to accurately detect significant differences in gender role beliefs and their possible relation to well-being. In this case, culture should not be reduced solely to the participant's nationality; therefore, a more nuanced approach needs to be adopted. This entails considering various aspects of culture, such as religious or political values, family dynamics, and educational levels, to capture the complexity of culture and its influences on gender role beliefs.

Secondly, future research should evaluate and compare statistically different questionnaires measuring gender role beliefs to find the most reliable and valid tool for measuring this complex concept. Currently, there is no measurement tool for gender role beliefs, resulting in a lack of methodological consistency in gender-related research. Many studies, including this one, applied tools measuring only dimensions of traditional or egalitarian gender roles, however, according to Knight & Brinton (2017), it is not enough to capture the complexity of gender role beliefs. Consequently, they proposed the use of four distinct classes of gender role beliefs: Traditionalism, Liberal Egalitarianism, Egalitarian Familism, and Flexible Egalitarianism. Thus, the comparison of different methods, such as traditional/egalitarian dimensions versus distinct classes of gender role beliefs, can contribute to the methodological consistency in gender-related research.

Lastly, future studies should focus on including the male or non-binary perspective to increase the possibility of obtaining important insights. Even though the current study did not differentiate participants based on their sex characteristics but purely on their gender identity,

this research focused only on women's perspectives towards gender role beliefs. For example, in this study, many females showed in their answers a certain superiority to the female gender. Thus, it would be interesting to see if other genders, especially males, would obtain a similar pattern in their answers.

Conclusion

This study explored gender role beliefs among women in Eastern and Western Europe and their relationship to well-being using qualitative and quantitative measures. Results demonstrated that Eastern European women have more traditional gender role beliefs than Western European women, but it does not affect their perceived well-being. These findings contribute to a better understanding of modern gender role beliefs among women in Europe. Since this is one of the first studies to explore gender role beliefs and their influence on well-being, future research should focus on including other genders and different variables of culture to further examine differences between cultures, gender role beliefs, and their possible influence on well-being.

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Appendix A

Gender Role Beliefs Questionnaire.

Task: Select one answer that best represents your belief about the gender roles of men and women.

	1.	2.	3.	4.	5.
	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
1. Men have better leadership abilities than women.					
2. A woman is allowed to sleep around with multiple partners if she wants to.					
3. Women are more affectionate than men.					
4. Men can be a stay-at-home husband.					
5. It is a man's job to propose to a woman.					
6. It is not a weak thing for men to cry.					
7. Men are more willing to cheat on their partner in a relationship.					
8. It is appropriate for a woman to ask a man on a date.					
9. Only when a woman has a child, she is a real woman.					
10. All men are allowed to wear make-up.					
11. It is a man's responsibility to support the family financially.					

12. Women do not have to shave their legs, armpits, and/or bikini line.
13. Women are better at housework chores than men.
14. Men can have many female friends without being attracted to them.
15. If one parent is to care for a child, the child develops better if it is the mother rather than the father.
16. Women are good at STEM-like jobs (science, technology, engineering and math).

Appendix B

The list of sources used per item in the Gender Role Beliefs Questionnaire.

Item	Source
1. Men have better leadership abilities than women.	Bem, S. L. (2011). Bem Sex Role Inventory. <i>PsycTESTS Dataset</i> . https://doi.org/10.1037/t00748-000
2. A woman is allowed to sleep around with multiple partners if she wants to.	Muehlenhard, C. L., & McCoy, M. L. (1991). Double Standard/Double Bind: The Sexual Double Standard and Women's Communication about Sex. <i>Psychology of Women Quarterly</i> , 15(3), 447–461. https://doi.org/10.1111/j.1471-6402.1991.tb00420.x
3. Women are more affectionate than men.	Bem, S. L. (2011). Bem Sex Role Inventory. <i>PsycTESTS Dataset</i> . https://doi.org/10.1037/t00748-000
4. Men can be a stay-at-home husband.	Kaufman, G. (2000). Do Gender Role Attitudes Matter? <i>Journal of Family Issues</i> , 21(1), 128–144. https://doi.org/10.1177/019251300021001006
5. It is a man's job to propose to a woman.	Mills, M. J., Culbertson, S. S., Huffman, A. H., & Connell, A. R. (2012). Assessing gender biases. <i>Gender in Management: An International Journal</i> , 27(8),

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9. Only when a woman has a child, she is a real woman. Wegs, C., Creanga, A. A., Galavotti, C., & Wamalwa, E. W. (2016). Community Dialogue to Shift Social Norms and Enable Family Planning: An Evaluation of the Family Planning Results Initiative in Kenya. *PLOS ONE*, *11*(4), e0153907. <https://doi.org/10.1371/journal.pone.0153907>
10. All men can wear make-up. Gough, B., Hall, M., & Seymour-Smith, S. (2014). Straight Guys Do Wear Make-Up: Contemporary Masculinities and Investment in Appearance. *Palgrave Macmillan UK EBooks*, 106–124. https://doi.org/10.1057/9781137394842_7
11. It is a man's responsibility to support the family financially. Maier, M. (1999). On the Gendered Substructure of Organization: Dimensions and Dilemmas of Corporate Masculinity. *SAGE Publications, Inc. EBooks*, 69–94. <https://doi.org/10.4135/9781452231365.n5>
12. Women do not have to shave their legs, armpits, and/or bikini line. Toerien, M., & Wilkinson, S. (2003). Gender and body hair: constructing the feminine woman. *Womens Studies International Forum*, *26*(4), 333–344. [https://doi.org/10.1016/s0277-5395\(03\)00078-5](https://doi.org/10.1016/s0277-5395(03)00078-5)
13. Women are better at housework chores than men. Miller, C. C. (2019, June 20). *Why Women, but Not Men, Are Judged for a Messy House*. The New York Times.
14. Men can have many female *Why Men Can't Be Friends With Women They're*

<p>friends without being attracted to them.</p>	<p><i>Attracted To (And Some Can) - Bryan Reeves.</i> (n.d). Bryan Reeves. https://bryanreeves.com/can-men-be-friends-with-women-theyre-sexually-attracted-to/</p>
<p>15. If one parent is to care for a child, the child develops better if it is the mother rather than the father.</p>	<p>Baron, J., & Prasad, P. (1996). Measurement of gender-role attitudes, beliefs, and principles. <i>University of Pennsylvania</i>. https://www.sas.upenn.edu/~baron/papers.htm/pp.htm</p>
<p>16. Women are good at STEM-like jobs (science, technology, engineering and math).</p>	<p>Casad, B. J., Franks, J. E., Garasky, C. E., Kittleman, M. M., Roesler, A. C., Hall, D. Y., & Petzel, Z. W. (2021). Gender inequality in academia: Problems and solutions for women faculty in STEM. <i>Journal of Neuroscience Research</i>, 99(1), 13–23. https://doi.org/10.1002/jnr.24631</p>

Appendix C

Items that represent traditional gender role beliefs.

(about men)	(about women)
1. Men have better leadership abilities than women.	3. Women are more affectionate than men.
5. It is a man’s job to propose to a woman.	9. Only when a woman has a child, she is a real woman.
7. Men are more willing to cheat on their partner in a relationship.	13. Women are better at housework chores than men.
11. It is a man’s responsibility to support the family financially.	15. If one parent is to care for a child, the child develops better if it is the mother rather than the father.

Appendix D

Items that represent egalitarian gender role beliefs.

(about men)	(about women)
4. Men can be a stay-at-home husband.	2. A woman is allowed to sleep around with multiple partners if she wants to.
6. It is not a weak thing for men to cry.	8. It is appropriate for a woman to ask a man on a date.
10. All men can wear make-up.	12. Women do not have to shave their legs, armpits, and/or bikini line.
14. Men can have many female friends without being attracted to them.	16. Women are good at STEM-like jobs (science, technology, engineering and math).

Appendix E

The scoring system of the Gender Role Beliefs Questionnaire.

Scores per item

Strongly disagree = 1; Disagree = 2; Neither agree nor disagree = 3; Agree = 4; Strongly disagree = 5.

Normal scoring for items 1,3,5,7,9,11,13,15

Reverse scoring for items 2,4,6,8,10,12,14,16

Scores per category

A person shows *traditional gender role beliefs* if their score is >64.

A person shows *traditional towards transitional gender role beliefs* if their score is between 63 and 48.

A person shows *egalitarian towards transitional gender role beliefs* if their score is between 47 and 32.

A person shows *egalitarian gender role beliefs* if their score is <31.