

RELATIONSHIP BETWEEN SOCIOECONOMIC FACTORS AND HEALTH BELIEF MODEL PERCEPTIONS IN MUSCULOSKELETAL INJURY TREATMENT

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INFO ARTIKEL

Riwayat Artikel:

Received :10-09-2026

Revised :20-09-2026

Accepted :02-10-2026

Keywords: Musculoskeletal Injuries;
Socioeconomic Factors;
Perception; Health Belief Model.

DOI: <https://doi.org/10.62335>

ABSTRACT

This study aimed to analyze the relationship between socioeconomic factors and community perceptions of musculoskeletal injury management based on the components of the Health Belief Model in Tanah Datar Regency. A cross-sectional observational analytic design was conducted from November to December 2023. A total of 352 respondents were selected using consecutive sampling and completed the study questionnaire. Bivariate analysis was performed to examine the relationships between education, occupation, and income and the perception components of the Health Belief Model. The findings showed that education, occupation, and income were associated with perceived susceptibility. Education was also associated with perceived benefits, perceived barriers, self-efficacy, and cues to action. Occupation was associated with perceived barriers, while income was associated with self-efficacy. No significant relationships were found between several other perception components and the socioeconomic factors examined. These findings indicate that socioeconomic factors, particularly education, are associated with variations in community perceptions regarding musculoskeletal injury management.

Individuals with higher educational levels tended to perceive greater benefits of medical treatment compared with traditional treatment. These findings highlight the relevance of socioeconomic characteristics in understanding community perceptions and health-related decision-making regarding musculoskeletal injury management.

ABSTRAK

Penelitian ini bertujuan untuk menganalisis hubungan antara faktor sosial ekonomi dan persepsi masyarakat terhadap penanganan cedera muskuloskeletal berdasarkan komponen *Health Belief Model* di Kabupaten Tanah Datar. Penelitian ini menggunakan desain potong lintang (*cross-sectional*) dengan jenis observasional analitik yang dilaksanakan pada November hingga Desember 2023. Sebanyak 352 responden dipilih menggunakan teknik *consecutive sampling* dan mengisi kuesioner penelitian. Analisis bivariat dilakukan untuk mengetahui hubungan antara pendidikan, pekerjaan, dan pendapatan dengan komponen persepsi dalam *Health Belief Model*. Hasil penelitian menunjukkan bahwa pendidikan, pekerjaan, dan pendapatan berhubungan dengan persepsi kerentanan (*perceived susceptibility*). Pendidikan juga berhubungan dengan persepsi manfaat (*perceived benefits*), persepsi hambatan (*perceived barriers*), efikasi diri (*self-efficacy*), dan isyarat untuk bertindak (*cues to action*). Pekerjaan berhubungan dengan persepsi hambatan, sedangkan pendapatan berhubungan dengan efikasi diri. Tidak ditemukan hubungan yang bermakna antara beberapa komponen persepsi lainnya dengan faktor sosial ekonomi yang diteliti. Temuan ini menunjukkan bahwa faktor sosial ekonomi, khususnya pendidikan, berhubungan dengan variasi persepsi masyarakat mengenai penanganan cedera muskuloskeletal. Individu dengan tingkat pendidikan yang lebih tinggi cenderung memiliki persepsi manfaat pengobatan medis yang lebih besar dibandingkan dengan pengobatan tradisional. Temuan ini menegaskan pentingnya karakteristik sosial ekonomi dalam memahami persepsi masyarakat dan pengambilan keputusan terkait kesehatan dalam penanganan cedera muskuloskeletal.

INTRODUCTION

Musculoskeletal injury is an injury involving the tissues that form the structural components of the body, including muscles, connective tissues, nerves, bones, and joints, which support body movement and daily activities (Sholihah, 2018). Musculoskeletal

injuries are an important health problem because they may interfere with physical function and daily activities and may result in disability when not appropriately managed. Based on the National Basic Health Research (Riskesdas), the overall prevalence of injuries in Indonesia increased from 7.5% in 2007 to 9.2% in 2018 (Badan Penelitian dan Pengembangan Kesehatan, 2007; Riskesdas 2018 Team, 2019a). In 2007, the most common causes of injury were falls (58.0%), land transportation accidents (25.9%), and injuries caused by sharp or blunt objects (20.6%). In 2018, traffic accidents remained an important cause of injury, with the lower extremities being the most frequently affected body region, accounting for 67.9% of cases (Riskesdas 2018 Team, 2019a). The burden of traffic-related injuries is also substantial in the Southeast Asian region. The World Health Organization estimated that approximately 316,000 people die annually from road traffic injuries in the region, while many more experience injuries or disabilities requiring long-term care (Sharma, 2017).

The burden of injury is also evident in West Sumatra Province. The prevalence of injuries in West Sumatra was 7.2% in 2007 and increased to 8.72% in 2018 (Badan Penelitian dan Pengembangan Kesehatan, 2007; Riskesdas 2018 Team, 2019b). In Tanah Datar Regency, the prevalence of injury in 2018 was 7.25%, with the lower extremities reported as the most frequently affected body region (Riskesdas 2018 Team, 2019b). Traffic accidents were among the reported causes of injury in the region. Data from the Central Bureau of Statistics of West Sumatra Province also indicate an increase in the number of traffic accidents in Tanah Datar Regency between 2021 and 2022 (Badan Pusat Statistik Provinsi Sumatera Barat, 2022). In addition, superficial injuries were among the three most frequently reported cases in the emergency department of M.A. Hanafiah Hospital (Fauziyah et al., 2023). These findings indicate that injuries, including musculoskeletal injuries, represent a relevant health concern in Tanah Datar Regency and require appropriate management to prevent further complications.

Despite the availability of formal health services, people in Indonesia may choose traditional treatment when managing musculoskeletal injuries. One form of traditional treatment that remains practiced as part of Indonesia's cultural heritage is *sangkal putung*, an alternative treatment commonly used for fractures without surgical intervention (Herdiana & Winarti, 2023). Previous studies have documented the use of traditional treatment among patients with fractures and musculoskeletal injuries, including *sangkal putung* (Sovia et al., 2020; Setianingsih & Rusmiati, 2023). According to the 2018 Riskesdas, approximately 31.4% of the Indonesian population utilized traditional health services, while the proportion in West Sumatra was 31.3% (Riskesdas 2018 Team, 2019a). Manual skill-based traditional health services, including massage, reflexology, and acupressure, constituted the most frequently utilized form of traditional health service in West Sumatra (Riskesdas 2018 Team, 2019b). Although treatment choices are influenced by individual preferences and circumstances, inappropriate management of musculoskeletal injuries may increase the risk of complications. Therefore, understanding the factors associated with community perceptions and treatment

decisions is important for promoting appropriate health-seeking behavior.

Treatment decisions may be influenced by socioeconomic characteristics, including education, occupation, and income. Economic conditions may affect treatment selection because treatment costs can become an important consideration for individuals with limited financial resources. Previous research has reported an association between economic factors and treatment selection among patients with fractures (Yuliani et al., 2020). Studies concerning *sangkal putung* have also reported that considerations related to treatment cost, time, and accessibility may influence individuals to select traditional treatment as an alternative to medical care (Umar et al., 2020; Sholihah, 2018). Education is another important socioeconomic characteristic that may influence health-related perceptions and behavior. Education can influence an individual's access to information, social interaction, and ability to understand health-related information, thereby potentially affecting health behavior (Dharmayanti et al., 2018). Previous research has also demonstrated an association between education and attitudes toward treatment options for musculoskeletal trauma (Rahman et al., 2023). In addition, occupation may influence social interactions and socioeconomic conditions, while differences in occupational characteristics may be associated with differences in income and access to resources (Muthalib & Mashur, 2019; Pangi et al., 2020; Pratama et al., 2022). These findings suggest that socioeconomic characteristics may be relevant to understanding differences in people's perceptions and decisions regarding musculoskeletal injury management.

Community perceptions regarding health problems can be examined using the Health Belief Model (HBM). The HBM is a psychological model used to explain and predict health-related behavior based on individual perceptions and beliefs regarding health conditions and available actions (Glanz et al., 2015). The model consists of several major constructs, including perceived susceptibility, perceived severity, perceived benefits, perceived barriers, cues to action, and self-efficacy. Perceived susceptibility refers to an individual's perception of the likelihood of experiencing a health problem, while perceived severity concerns the perceived seriousness of the condition. Perceived benefits describe the individual's perception of the advantages of performing a particular health behavior, whereas perceived barriers refer to perceived obstacles to performing the behavior. Cues to action represent factors that stimulate an individual to take action, and self-efficacy refers to the individual's confidence in their ability to perform the behavior (Glanz et al., 2015). The HBM has been applied in studies examining health perceptions and treatment-related behavior in various populations, including traditional treatment selection and other health-related behaviors (Djafar et al., 2018; Fauziah, 2017; Wignyo Adiyoso et al., 2023). In the context of musculoskeletal injuries, these constructs may help explain how individuals perceive the risks and consequences of injuries, evaluate the benefits and barriers of medical or traditional treatment, and decide whether to seek appropriate health services.

Tanah Datar Regency provides an important context for examining the

relationship between socioeconomic characteristics and community perceptions of musculoskeletal injury management. Geographically, Tanah Datar is located around Mount Merapi, Mount Singgalang, and Mount Sago and has numerous rivers that support its agricultural sector. Agriculture is therefore one of the main sources of livelihood for the local population (Asmadia & Andriany, 2022). In 2022, approximately 174,164 people in Tanah Datar were employed, while 10,940 were classified as openly unemployed (Afifah, 2023). A considerable proportion of the working population consisted of individuals working independently or with temporary or unpaid assistance, while a substantial proportion had elementary school education as their highest educational attainment (Fauziyah et al., 2023). The socioeconomic characteristics of the region can also be reflected in its dependency ratio, which reached 46.15% in 2022. This indicates that for every 100 people of productive age, approximately 46 to 47 people of nonproductive age were economically dependent (Firmandes & Chardiman, 2023).

The continued utilization of traditional health services in Tanah Datar further emphasizes the importance of understanding the factors associated with treatment-related perceptions. Approximately 31% of the population in the region utilized traditional health services, with manual skill-based services such as massage, reflexology, and acupressure representing the most frequently used type (Risksedas 2018 Team, 2019b). The continued use of traditional treatment despite the availability of formal health services suggests that treatment decisions may be shaped by multiple factors, including socioeconomic characteristics, social environment, and individual health perceptions. Previous studies have examined factors associated with the selection of traditional treatment among fracture patients; however, research specifically examining the relationship between socioeconomic factors and community perceptions of musculoskeletal injury management based on the HBM in Tanah Datar Regency remains limited. Therefore, further investigation is needed to determine whether education, occupation, and income are associated with differences in the HBM perception components related to musculoskeletal injury management. Accordingly, the research question is whether there is a relationship between socioeconomic factors, including education, occupation, and income, and community perceptions of musculoskeletal injury management based on the components of the Health Belief Model in Tanah Datar Regency. This study aims to analyze the relationship between socioeconomic factors and community perceptions of musculoskeletal injury management based on the Health Belief Model. The findings are expected to provide information regarding socioeconomic characteristics associated with community perceptions and health-related decision-making and may serve as a basis for health workers and policymakers in developing health education and health service strategies appropriate to the characteristics and needs of the local community.

METHODS

This study employed a quantitative approach with a cross-sectional design using primary data collected through questionnaires. The study was part of an umbrella study entitled “Community Perceptions of Musculoskeletal Trauma Management in Review of the Health Belief Model in West Sumatra,” which was conducted in West Sumatra Province from 2022 to 2023. The present study was conducted in Tanah Datar Regency, West Sumatra, from November to December 2023. The study population consisted of residents of Tanah Datar Regency aged 18–50 years. A total of 349 respondents were included in the study and selected using consecutive sampling based on the predetermined inclusion and exclusion criteria. The inclusion criteria were being domiciled in Tanah Datar Regency, being 18–50 years old, and being willing to complete the research questionnaire. The exclusion criteria were being unable to read and write and being unable to speak or hear. Data were collected using a structured research questionnaire administered to eligible respondents. The collected data were then analyzed to examine the relationship between socioeconomic factors, including education, occupation, and income, and community perceptions of musculoskeletal injury management based on the components of the Health Belief Model.

RESULT AND DISCUSSION

Frequency Distribution of Respondents based on Socio-Economic Factors in Tanah Datar Regency

Table 1 illustrates the frequency distribution of the subjects of this study based on socio-economic factors consisting of occupation, education, and income. Based on the table, it can be seen that the last level of education of the majority of subjects is higher education, namely junior high school, totaling 287 people (81.5%). The highest frequency of subject occupations were housewives, not working, and manual laborers with 85 people (24.1%), 84 people (23.9%), and 75 people (21.3%) respectively, while the highest income level was low income with 239 people (67.9%).

Table 1 Frequency Distribution of Subjects based on Socio-Economic Factors in Tanah Datar Regency

Socio-economic factors	f	%
Jobs		
• Manual Laborer	75	21,3%
• Housewife	85	24,1%
• Public Servant	29	8,2%
• Private Employee	21	6,0%
• Self-employed	58	16,5%
• Not Working	84	23,9%
Total	352	100%

Education		
• Low	65	18,5%
• High	287	81,5%
Total	352	100%
Revenue		
• Low	239	67,9%
• Medium	60	17,0%
• High	35	9,9%
• Very high	18	5,1%
Total	352	100%

Public perception in terms of the Health Belief Model

Perceived severity, has a median of 4.00. The number of people who have a positive perception of this component is 297 people (84.4%) with a median. The perceived benefits component has a median of 10.00. In this component there are 313 people (88.9%) with positive perceptions that have a median . Furthermore, the perceived barriers component obtained a median of 6.00. In this component there are 241 people (68.5%) who have positive perceptions with a median 6.00. In the self-efficacy component, the median is 10.00 and there are 311 people (88.4%) respondents with positive perceptions who have a median . In the last component, namely cues to action, the median is 5.00. A total of 327 people (92.9%) have positive perceptions with a median .

Table 2 Distribution of subject perceptions based on the Health Belief Model in Tanah Datar District

Health belief model components	Positive		Negative	
	f	%	f	%
Perceived susceptibility	185	52,6%	167	47,4%
Perceived severity	297	84,4%	55	15,6%
Perceived benefits	313	88,9%	39	11,1%
Perceived barriers	241	68,5%	111	31,5%
Self-efficacy	311	88,4%	41	11,6%
Cues to actions	327	92,9%	25	7,1%
Total				

Bivariate Analysis

Relationship between Education and Health Belief Model Components on Musculoskeletal Injury Management in Tanah Datar Regency. Table 3 shows that people with higher education levels have greater positive perceptions of most components of the health belief model except for the perceived susceptibility component. The percentage of positive subject perceptions of each component was 84% for perceived severity, 94.4% for perceived benefit, 72.1% for perceived barrier, 90.9% for self-efficacy, and 94.8% for cues to action.

Table 3 Relationship between Education and Health Belief Model Components on Musculoskeletal Injury Management in Tanah Datar Regency

HBM Components		Education				Total		P Value
		Low		High				
		f	%	f	%	f	%	
P. Susceptibility	Positive	44	67,7	141	49,1	185	52,6	0,010
	Negative	21	32,3	146	50,9	167	47,4	
	Total	65	100	287	100	352	100	
P. Severity	Positive	56	86,1	241	84	297	84,4	0,804
	Negative	9	13,9	46	16	55	15,6	
	Total	65	100	287	100	352	100	
P. Benefit	Positive	42	64,6	271	94,4	313	88,9	0,000
	Negative	23	35,4	16	5,6	39	11,1	
	Total	65	100	287	100	352	100	
P. Barrier	Positive	34	52,3	207	72,1	241	68,5	0,003
	Negative	31	47,7	80	27,9	111	31,5	
	Total	65	100	287	100	352	100	
Self-efficacy	Positive	50	76,9	261	90,9	311	88,3	0,003
	Negative	15	23,1	26	9,1	41	11,7	
	Total	65	100	287	100	352	100	
Cues to action	Positive	55	84,6	272	94,8	327	92,9	0,009
	Negative	10	15,4	15	5,2	25	7,1	
	Total	65	100	287	100	352	100	

Education variables have a significant relationship with perceived susceptibility, perceived benefit, perceived barrier, self-efficacy, and cues to action. The significant relationship between education and perceived susceptibility has a p value of 0.010. This

is in accordance with research conducted by Minarni Wartiningsih, et al (2020) in Surabaya which showed a significant relationship between education level and perceived susceptibility. The higher the mother's education level, the higher the mother's perception of her child's susceptibility to disease.

Furthermore, the education variable also has a significant relationship with perceived benefits and obtained a p value of 0.000. The results of this study found that respondents with higher education levels had more positive perceptions than those with lower education levels. In addition, respondents with low education levels have more negative perceptions than those with high education. This means that people with higher education perceive the benefits of seeing a doctor more than people with lower education. Furthermore, people with low education perceive the benefits of going to sangkal putung more than people with high education. The results obtained are in accordance with research conducted by Lia Listiani, et al (2022) that socio-economic factors affect a person's perceived benefits.

Another result that has a significant relationship is between the education variable and perceived barrier which has a p value of 0.003. People with high education have more positive perceptions than those with low education, while people with low education have more negative perceptions than those with high education. This can be interpreted that respondents with low education feel more obstacles in obtaining health services than those with high education. The results obtained are in accordance with the results of research conducted by Kamer Gür, et al (2021), namely that there is a relationship between parental education level and perceived barrier.(Kamer Gür et al., 2021).. Different results were found in research conducted by Hanifah Mufidati (2016) on Factors Associated with Community Perceptions of Filariasis in RW 03 Cimanggis Village. The study had an insignificant relationship between education and perceived susceptibility, perceived benefit, and perceived barrier.

In addition, education also has a significant relationship with self-efficacy. The p value obtained from the relationship is 0.003. People who have high education have higher positive perceptions than those with low education and people with low education have higher negative perceptions than those with high education. This can be interpreted that respondents with higher education have higher confidence to go to the doctor than those with low education and respondents with low education have higher confidence to go to sangkal putung than those with high education. These results are in accordance with research conducted by Yin Jou Chou & (2021) which shows a significant relationship between education and self-efficacy. A high level of self-efficacy was obtained in respondents with a high level of education. Different results were found in a study conducted by Cristina Drenkard (2022) that there was a non-meaningful relationship between education and self-efficacy towards fatigue and pain disorders.

The last significant relationship is between the education variable and cues to action. The results of the chi-square test of the two variables have a p value of 0.009. Respondents with higher education have more positive perceptions than those with

lower education and respondents with lower education have more negative perceptions than those with higher education. These results can be interpreted that more respondents with higher education choose to see a doctor immediately if a musculoskeletal injury occurs than respondents with lower education, while more respondents with lower education choose to go to sangkal putung immediately than those with higher education. This is in accordance with research conducted by Elys Fauziyah, namely that there is a significant relationship between education and cues to action. Research conducted by Evaristus Adesina, et al (2021) found different results, namely that there was no significant relationship between the two variables.

Furthermore, the results that do not show a significant relationship are between the perceived severity component and education, which has a p value of 0.804. These results are in line with research conducted by Evaristus Adesina, et al (2021). In this study, it was found that there were insignificant results between education and perceived severity felt towards covid-19 disease. Research conducted by Marcelo Fernandes Costa found different results, namely that there is a significant relationship between education and perceived severity of covid-19 symptoms. The results of this study indicate that education has no effect on an individual's beliefs regarding the risk of getting sick or the risk of leaving an injury untreated (perceived severity). This can occur because knowledge related to these risks is not absolutely obtained from formal education alone, but can also be obtained from non-formal education.(Ar-Rasily and Dewi, 2016). In addition, it can also be obtained from other people's experiences when the individual interacts with others. The difference in results found is due to the distribution of different levels of education of respondents, because the length of time a person carries out education will affect the individual's view of the disease as a serious health risk (Watson, 2018).(Watson, 2018). The lower a person's education, the lower the individual's knowledge regarding the prevention of disease symptoms, risky lifestyles, and their tendency to act (Elys Fauziyah, 2010). (Elys Fauziyah, 2010; Nurseha S. Djafar, Jon W. Tangka and Janne A. Kolompoy, 2018; Megah Andriany, Kusyogo Cahyo and Aditya Kusumawati, 2019).. The knowledge possessed by individuals plays a role in sociopsychological factors to influence individuals in behavior.(Husni Ritonga, 2019). In addition, differences that exist can also be caused by cultural differences between regions.

Occupational Associations with Health Belief Model Components on Musculoskeletal Injury Management in Tanah Datar Regency

Table 4 Association Between Occupation and Health Belief Model Components in Musculoskeletal Injury Management in Tanah Datar Regency

In Table 4, it can be seen that people with jobs as self-employed and civil servants have the most positive perceptions of the perceived susceptibility component with a percentage of both at 72.4%. The occupations of private employees, people who are not working, and manual laborers have the highest negative perceptions of this component. Each received a percentage of 66.7%; 56%; and 53.3%, respectively. Notes: Chi square, significant if $p < 0.05$

HBM Components		Jobs												Total		P Value
		Manual Laborer		IRT		Public Servant		Private Employee		Self-employed		Not working				
		f	%	f	%	f	%	f	%	f	%	f	%	f	%	
P. Susceptibility	Positive	35	46,7	43	50,6	21	72,4	7	33,3	42	72,4	37	44,0	185	52,6	0,001
	Negative	40	53,3	42	49,4	8	27,6	14	66,7	16	27,6	47	56,0	167	47,4	
Total		75	100	85	100	29	100	21	100	58	100	84	100	352	100	
P. Severity	Positive	69	92	69	81,2	28	96,5	18	85,7	45	77,6	68	80,9	297	84,4	0,074
	Negative	6	8	16	18,8	1	3,5	3	14,3	13	22,4	16	19,1	55	15,6	
Total		75	100	85	100	29	100	21	100	58	100	84	100	352	100	
P. Benefit	Positive	63	84	78	91,8	28	96,6	19	90,5	55	94,8	70	83,3	313	88,9	0,108
	Negative	12	16	7	8,2	1	3,4	2	9,5	3	5,2	14	16,7	39	11,1	
Total		75	100	85	100	29	100	21	100	58	100	84	100	352	100	
P. Barrier	Positive	57	76	62	72,9	21	72,4	17	81	38	65,5	46	54,8	241	68,5	0,034
	Negative	18	24	23	27,1	8	27,6	4	19	20	34,5	38	45,2	111	31,5	
Total		75	100	85	100	29	100	21	100	58	100	84	100	352	100	
Self-efficacy	Positive	62	82,7	76	89,4	28	96,5	19	90,5	53	91,4	73	86,9	311	88,4	0,401
	Negative	13	17,3	9	10,6	1	3,5	2	9,5	5	8,6	11	13,1	41	11,6	
Total		75	100	85	100	29	100	21	100	58	100	84	100	352	100	
Cues to action	Positive	67	89,3	68	90,7	27	93,1	20	95,2	55	94,8	80	95,2	327	92,9	0,729
	Negative	8	10,7	7	9,3	2	6,9	1	4,8	3	5,2	4	4,8	25	7,1	
Total		75	100	75	100	29	100	21	100	58	100	84	100	352	100	

The results obtained from this study are that there is a significant relationship between work with perceived susceptibility and perceived barrier. The relationship between occupation and perceived susceptibility has a p value of 0.001 and the relationship with perceived barrier has a p value of 0.034. Respondents who worked as self-employed and civil servants had the most positive perceptions among other types of employment, while respondents who worked as private employees and who did not work had more negative perceptions than other types of employment. This can be interpreted that respondents with these jobs feel more vulnerable to musculoskeletal injuries than other types of jobs. In the perceived barrier component, it was found that people with private employee jobs and manual laborers had a greater positive perception of the component than other types of jobs. This means that people with these types of jobs perceive no barriers in obtaining health services more than other types of jobs. In addition, people who were unemployed and self-employed had greater negative perceptions than other types of employment. This suggests that people with these occupations perceive more barriers in obtaining health services for musculoskeletal injuries. The results of the chi-square test are in accordance with research conducted by Geoffrey Bentum-Micah, et al (2023) which showed a significant relationship between occupation and the two components. Research conducted by Evaristus Adesina, et al (2021) showed different results, namely that there was no significant relationship between work variables and perceived susceptibility and perceived barrier variables.

The results of the analysis of the relationship between work and perceived severity, perceived benefit, and cues to action have p values of 0.074; 0.108; 0.729, respectively. This value indicates that there is no significant relationship between work and these three variables. This is in line with research conducted by Evaristus Adesina, et al (2021). The study found that there was no significant relationship between occupation and perceived severity of covid-19 disease. In addition, it was also found that there was no significant relationship between work and perceived benefits and cues to action in carrying out covid-19 disease prevention behavior. Research conducted by Anis Fauziah (2017) also found an insignificant relationship between work and perceived severity in the results. (Anis Fauziah, 2017). Yichen Wang, et al (2023) conducted a study that obtained different results, namely that there was a significant relationship between perceived benefit and work in taking osteoporosis prevention measures. Research conducted by Mira Triharini, et al (2023) has different results, namely there is a relationship between cue to action and socio-economic factors. The next analysis is the relationship between work and self-efficacy which produces a p value of 0.401. The p value obtained indicates that there is no significant relationship between the two variables. These results are different from research conducted by Yichen Wang (2023). The study analyzed the relationship between the two variables in taking preventive measures for osteoporosis.

This can happen because apart from occupational factors, people's perceptions of behavior can also be influenced by internal factors and cultural factors. The internal factors of an individual will play a role in comparing and learning from the experiences of others and that individual. (Journal et al., 2021). Cultural factors will influence a person's beliefs in acting to treat musculoskeletal injuries. Tribes that are in remote places will use health services less (Ariyani and Susilo, 2020). (Ariyani and Susilo, 2020). Communication that occurs in the work environment is also related to a person's behavior. The extent to which the person perceives an environment as satisfying or disappointing will affect the person's behavior. (Husni Ritonga, 2019). In addition, in the work environment an individual can interact, increase knowledge, and exchange experiences in terms of treatment or health problems so that it can influence a person's views (Husni Ritonga, 2019). (Husni Ritonga, 2019). People who do not work will get information from the family environment, closest friends, or neighbors that cannot necessarily be proven scientifically and only thoughts from the habits of the environment. (Safrizal Rahman et al., 2023). Perceptions of self-efficacy will affect a person's health behavior. High confidence in self-efficacy will increase good health behavior. Self-efficacy can be improved with the support of family or closest people. Therefore, interactions between individuals that occur in the work environment can affect a person's level of self-efficacy. (Husni Ritonga, 2019; Triharini, Mishbahatul Mar'ah Has and Nofita, 2023).

Work will affect a person's economic status because the income earned from each job is different. Self-employed work has various types of activities so that the income

earned also varies according to the type of activity. If the business is carried out on a household scale, it is likely that the economic condition is still middle class (Sutikno et al., 2018). (Sutikno et al., 2018). In addition, researchers assume that people who work as self-employed people may feel more vulnerable and feel higher barriers to obtaining health services because not all of them have health insurance. This is different from people who work as civil servants who are required by the government to have health or employment insurance, so that barriers to obtaining health services are smaller. (Minister of Education, 2021)

Relationship between Income and Health Belief Model Components on Musculoskeletal Injury Management in Tanah Datar Regency

The results from table 5 show that respondents with moderate, high, and very high income levels have greater positive perceptions than negative perceptions of perceived susceptibility, while respondents with low income have greater negative perceptions.

Table 5 Relationship between Income and Health Belief Model Components on Musculoskeletal Injury Management in Tanah Datar Regency

HBM Components				Revenue						Total		P Value
				Low		Medium		High		Very high		
				f	%	f	%	f	%	f	%	
P. Susceptibility	Positive	114	47,7	31	51,7	25	71,4	15	83,3	185	52,6	0,003
	Negative	125	52,3	29	48,3	10	28,6	3	16,7	167	47,4	
	Total	239	100	60	100	35	100	18	100	352	100	
P. Severity	Positive	201	84,1	48	80	32	91,4	16	88,9	297	84,4	0,478
	Negative	38	15,9	12	20	3	8,6	2	11,1	55	15,6	
	Total	239	100	60	100	35	100	18	100	352	100	
P. Benefit	Positive	213	89,1	49	81,7	34	97,1	17	94,4	313	88,9	0,103
	Negative	26	10,9	11	18,3	1	2,9	1	5,6	39	11,1	
	Total	239	100	60	100	35	100	18	100	352	100	
P. Barrier	Positive	159	66,5	45	75	23	65,7	14	77,8	241	68,5	0,485
	Negative	80	33,5	15	25	12	34,3	4	22,2	111	31,5	
	Total	239	100	60	100	35	100	18	100	352	100	
Self-efficacy	Positive	214	89,5	46	76,7	33	94,3	18	100	311	88,4	0,008
	Negative	25	10,5	14	23,3	2	5,7	0	0	41	11,6	
	Total	239	100	60	100	35	100	18	100	352	100	

Cues to action	Positive	225	94,1	51	85	34	97,1	17	94,4	327	92,9	0,064
	Negative	14	5,9	9	15	1	2,9	1	5,6	25	7,1	
Total		239	100	60	100	35	100	18	100	352	100	

This study found that income level has a significant relationship with the components of perceived susceptibility and self-efficacy. The p value obtained between the perceived susceptibility component and income is 0.003. Respondents with very high income have more positive perceptions than other income levels and respondents with low income levels have more negative perceptions than other income levels. This can be interpreted that more respondents with high incomes feel vulnerable to getting musculoskeletal injuries than other income levels and more respondents with low incomes feel not vulnerable to getting musculoskeletal injuries than other income levels. These results are in line with research conducted by Wignyo Adiyoso, et al (2023) which shows a significant relationship between low-level income and perceptions of vulnerability in removing barriers to obtaining the covid-19 vaccine. Research conducted by Wignyo Adiyoso, et al (2023) found different results, namely that there was no significant relationship between moderate income and perceived susceptibility.

Furthermore, the self-efficacy component has a significant relationship with income and a p value of 0.008 was obtained. (Wignyo Adiyoso et al., 2023).. Respondents with very high income have more positive perceptions than respondents with other income levels and respondents with moderate income levels have more negative perceptions than other income levels. This can be interpreted that respondents with very high income levels are more confident to seek medical treatment when experiencing musculoskeletal injuries compared to other income levels and respondents with moderate income levels are more confident to seek treatment when experiencing musculoskeletal injuries compared to other income levels. Research conducted by Yichen Wang (2023) obtained the same results, namely that there is a significant relationship between income and self-efficacy in taking preventive measures for osteoporosis. (Yichen Wang et al., 2023).. Research conducted by Rina and Lilis (2023) also showed a relationship between socio-economic factors and self-efficacy in determining the choice of treatment for musculoskeletal injuries to fracture healers. (Rina R and Lilis P, 23AD)..

In the chi-square test results between the income variable and perceived severity, perceived benefit, and perceived barrier, no significant relationship was found between these variables. The p values obtained are 0.478; 0.103; 0.485 respectively. This is in accordance with research conducted by Evaristus Adesina, et al (2021) which shows that there is no significant relationship between income and perceived severity of covid-19 disease. (Evaristus Adesina et al., 2021).. The study also found that there was no significant relationship between income and perceived benefits in performing covid-19 disease prevention behavior (Evaristus Adesina et al., 2021). (Evaristus Adesina et al.,

2021).. In addition, there is also a non-significant relationship between income and perceived barriers to covid-19 disease prevention behavior (Evaristus Adesina et al., 2021). (Evaristus Adesina et al., 2021).. Different results were obtained in a study conducted by Wignyo Adiyoso, et al (2023), namely, there is a significant relationship between low income levels with perceived severity, perceived benefit, and perceived barrier. (Wignyo Adiyoso et al., 2023)..

The relationship between the last two variables, namely income and cues to action, has a p value of 0.064. The results of the analysis of the two variables showed no significant relationship between the two and in accordance with research conducted by Lamei Gong and Jiazhi Sheng (2022). The study found that there was no significant relationship between income and cues to action in performing sports behavior actions (Yichen Wang et al., 2013). (Yichen Wang et al., 2023).. Research conducted by Evaristus Adesina, et al (2021) found different results, namely that there is a significant relationship between the two variables (Evaristus Adesina et al., 2021)..

Income will affect a person's survival and opportunity to get health services, thus affecting the economic situation of the individual. Sufficient income will finance expenditures for activities that will be carried out and will likely provide better health services to an individual. (Rebecca A. Ngantung, Damajanty H. C. Pangemanan and Paulina N. Gunawan, 2015; Abdul Hakim, 2018).. Poor economic capacity will affect a person's ability to fulfill their basic needs, resulting in difficulty in obtaining good health services. (Rebecca A. Ngantung, Damajanty H. C. Pangemanan and Paulina N. Gunawan, 2015).. Community behavior in the treatment of musculoskeletal injuries can also be influenced by the cost of treatment required. People with less economic ability who think that medical treatment is more expensive than traditional treatment, will prefer to go to traditional treatment (Rebecca A. Ngantung, 2015). (Rebecca A. Ngantung, Damajanty H. C. Pangemanan and Paulina N. Gunawan, 2015; Setianingsih and Rusmiati, 2023).. In this study, it was also found that the most common reason people did not want to see a doctor was because the costs were too expensive. Research conducted by Wayah Langit Sumirat, et al (2017) also found that people who seek treatment at Sangkal Putung are generally people with middle to lower economic levels. (Sumirat, Subagya and Rochani, 2017).. Therefore, researchers assume that the level of income that affects a person's economic level can affect a person's self-efficacy to choose actions taken to treat musculoskeletal injuries.

The results of this study indicate that income variables do not affect perceived benefits. Respondents with low, medium, high, and very high incomes have a percentage of positive perceptions of more than 80%, which means that all of them feel the benefits of seeing a doctor are greater than going to sangkal putung. Greater negative perceptions were found among respondents with low and medium education levels. Although many people feel these benefits, the choice of treatment for the management of musculoskeletal injuries can also be influenced by the severity of the injury in the patient as seen from the type of injury (Sovia et al., 2020). (Sovia et al., 2020). It is also supported by the reason

that most respondents in this study chose to seek treatment at Sangkal Putung because they felt mild symptoms of injury. Therefore, the researcher assumes that people with high income levels who can afford to see a doctor will not necessarily choose this treatment because it can also be influenced by the severity of the injury felt by the community.

CONCLUSION

This study found significant relationships between education and perceived susceptibility, perceived benefits, perceived barriers, self-efficacy, and cues to action, but not perceived severity. Occupation was significantly associated with perceived susceptibility and perceived barriers, whereas no significant relationships were found between occupation and perceived severity, perceived benefits, self-efficacy, or cues to action. Income was significantly associated with perceived susceptibility and self-efficacy, but not with perceived severity, perceived benefits, perceived barriers, or cues to action. These findings indicate that socioeconomic characteristics, particularly education, occupation, and income, are associated with selected components of community perceptions regarding musculoskeletal injury management. Health education and communication strategies should consider differences in socioeconomic characteristics, while future research should further investigate other individual, cultural, and contextual factors that may influence treatment perceptions and decisions.

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